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JEANNE HICKS, Clerk
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Deputy

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF YAVAPAI

THE STATE OF ARIZONA

Plaintiff,

vs.

STEVEN CARROLL DEMOCKER

Defendant.

No. P1300CR2008-1339

BEFORE:

THE HONORABLE WARREN R. DARROW
JUDGE PRO TEMPORE OF THE SUPERIOR COURT
DIVISION SIX
YAVAPAI COUNTY, ARIZONA

PRESCOTT, ARIZONA
TUESDAY, AUGUST 24, 2010

REPORTER'S TRANSCRIPT OF PROCEEDINGS

JURY TRIAL

TESTIMONY OF PHILIP KEEN, M.D.

 **ORIGINAL**

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P R O C E E D I N G S

THE COURT: Good morning. Please be seated.

We are on the record in the State versus Steven Carroll DeMocker. Mr. DeMocker is present with his attorneys, Mr. Sears and Mr. Hammond. The State is represented by Mr. Butner and Mr. Paupore. The jury has returned.

And Dr. Keen is back on the witness stand. He has been sworn for all proceedings in this matter.

And it's now time for cross-examination. Is the defense ready to proceed?

MR. HAMMOND: We are, your Honor.

THE COURT: Mr. Hammond.

C R O S S - E X A M I N A T I O N

BY MR. HAMMOND:

Q. Good morning, Dr. Keen.

A. Good morning.

Q. Doctor, you have been the medical examiner here in Yavapai County for 29 years?

A. Almost 29 years, yes, sir.

Q. You are retired now at least from official government service?

A. Yes, sir.

1 Q. You also spent 17 years as the medical examiner in
2 Maricopa County?

3 A. Six years as an assistant or -- or associate chief
4 and 14 years as chief.

5 Q. And some --

6 A. So basically 20 years in association with the
7 office in Phoenix.

8 Q. So if my arithmetic is any good, some of those
9 years in Maricopa County overlapped with some of the years up
10 here?

11 A. Yes, sir.

12 Q. How did they overlap?

13 A. The six years before I was chief in Maricopa, I was
14 still here. I had a continuous span of 17 years in Prescott
15 and then I had a gap in Yavapai County and then 10 years in
16 Yavapai County and Yavapai County was overlapping for a
17 period of time in Maricopa.

18 Q. Okay. And then by -- by what did you tell us June
19 of last year, you -- you -- you ended your -- your
20 contractual relationship with Yavapai County?

21 A. Yes, sir.

22 Q. And since then, you've continued to work, but on a
23 private consulting basis?

24 A. Primarily consulting work. I frequently have been
25 subpoenaed by the Maricopa County Attorney's Office to

1 present State's case.

2 Q. In cases that you were involved in before your
3 retirement?

4 A. Some cases that I was involved in. The Phoenix
5 office has lost nine pathologists since 2005, and as those
6 cases come before the courts, since I am still geographically
7 in the area, they usually call me down to take care of those
8 cases.

9 Q. You received your medical training in New Mexico?

10 A. Yes, sir.

11 Q. You also went to undergraduate school in
12 New Mexico?

13 A. Yes, sir.

14 Q. You probably don't know this, but you and I were in
15 the same college at the same time.

16 A. That's good.

17 Q. Good for who?

18 A. Probably for everyone.

19 Q. You were -- you were in college at New Mexico from
20 1961 to 1965 as an undergraduate?

21 A. Yes, sir.

22 Q. I may have served you food in the cafeteria. You
23 probably don't remember the part about who I am, but I
24 remember you.

25 A. I may have even served you food in the cafeteria

1 because I served in the cafeteria for a couple years too.

2 Q. Were you the little -- never mind.

3 You -- you told us that you have done in your
4 career 12,000 autopsies more or less?

5 A. Yes, sir.

6 Q. Those were done I take it almost entirely over the
7 40-year career that you've been -- been working and serving
8 as a pathologist?

9 A. Yes, sir.

10 Q. Again, arithmetic is not always my strongest suit,
11 but that would be an average of about 300 autopsies a year,
12 would it not?

13 A. It varied some, yes. And some, there were a few
14 years in the early '90s that was excessive numbers, but most
15 of the time, I'm running between three and 400.

16 Q. And you have -- of course as you told us, you have
17 testified hundreds of times?

18 A. Yes, sir.

19 Q. It is probably a pretty good bet that even though
20 we started at the same time, you've probably testified more
21 times than I've been examining witnesses.

22 A. It's possible.

23 Q. I'll tell you it's more than possible.

24 But, Dr. Keen, along the way, you've made
25 mistakes?

1 A. Yes, sir.

2 Q. Everybody does. Lawyers do. Forensic pathologists
3 do. And you do.

4 A. Yes, sir.

5 Q. It's not a -- a -- a mark really against a forensic
6 pathologist to say that -- that over his career, he may have
7 made mistakes? You would expect that?

8 A. Yes, sir. It's not unexpected at all.

9 Q. And indeed you've made mistakes in this case?

10 A. Yes, sir.

11 Q. For instance, you were very quick to point out to
12 us at the beginning of your direct examination that you had
13 made two mistakes in your autopsy report.

14 A. And I discovered another one.

15 Q. We'll get to the other one in a moment.

16 You -- you told us that -- that in your
17 autopsy report, you had listed the two contusions on the
18 right forearm as appearing on the left forearm?

19 A. Yes. There was contradiction. In the summary, it
20 was listed on the left, and in the description, it was listed
21 on the right.

22 Q. And you know that -- that -- that this left/right
23 question was actually brought to your attention during a
24 hearing in this courtroom last October?

25 A. Yes, sir.

1 Q. And at that time, my colleague, Mr. Sears, who had
2 the pleasure of examining you that day was the one who
3 pointed it out to you?

4 A. Yes, he pointed out one that I had not seen.

5 Q. And when he pointed it out to you, you immediately
6 acknowledged that you had made that mistake?

7 A. Yes, sir.

8 Q. And then you said when you came to court last week,
9 you were -- you were good to volunteer that -- that you had
10 found another mistake?

11 A. Yes, sir.

12 Q. And that -- that mistake had to do with abrasions
13 that you had noted that in your report you indicate occurred
14 on the left side when, in fact, you pointed out to us that
15 upon a review of your autopsy report, you -- you concluded
16 that those abrasions were actually on the right side?

17 A. Yes, sir.

18 Q. And so what we have here are two left/right errors,
19 both of which were acknowledged by you?

20 A. Yes, sir. And -- and the error is in the report,
21 not in the observation.

22 Q. And then after you made that second error and
23 recognized that you had made it, you went back and reviewed
24 your work carefully and concluded that those were the only
25 two clerical errors in your autopsy report and you so

1 testified?

2 A. I think I probably did, yes, sir.

3 Q. You testified to exactly that?

4 A. Yes, sir.

5 Q. Did you not, Doctor?

6 A. Yes, sir.

7 Q. You said that you went back and you reviewed your
8 report and you concluded that those were the only two errors
9 you had made?

10 A. Yes, sir.

11 Q. And now you're going to tell us that you -- that
12 you discovered -- since you were here a week ago and
13 testified, you've discovered a third?

14 A. Yes, sir.

15 Q. Tell us what the third error is.

16 A. In the final paragraph -- or the final sentence in
17 the paragraph in the Skull and Cranial Contents, the way
18 these templates are put together, they're a template and the
19 deviations from the normal are changed to the abnormalities that
20 you find and the normal sentence pops in and the normal
21 sentence reads that there are no fractures of the floor of
22 the cranial vault and in fact there are multiple fractures of
23 the floor of the cranial vault. And in the copy that I have
24 on my report, it's actually a strike-out.

25 But that's -- I don't know what page you have

1 there, but on the very last paragraph of the gross autopsy.

2 MR. HAMMOND: Your Honor, may I approach the
3 witness, please?

4 THE COURT: Yes, you may.

5 BY MR. HAMMOND:

6 Q. Dr. Keen, I'm going to hand you Exhibit 808, which
7 is the autopsy report which was introduced through the
8 prosecution through you last week. Would you tell us on what
9 page you find that error?

10 A. Yes. The autopsy --

11 Q. Would you give me the page number, please.

12 A. The autopsy page is 8, but there's a Bates stamp
13 that ends in numbers 559.

14 Q. 559?

15 A. And it's the last sentence above Toxicology. It's
16 actually a stricken sentence in the report. That's in error.
17 That sentence is not correct.

18 Q. The sentence which you say was stricken from your
19 report, but not stricken in the document provided to the
20 Court and to the jury is a sentence that reads: "There are
21 no hemorrhages or fractures of the osseous structures of the
22 floor of the cranial vault."

23 A. That is the sentence, and that is the incorrect
24 statement.

25 Q. Because we know there were fractures?

1 A. Yes, sir.

2 Q. That seems like a slightly more consequential error
3 than making your left/right errors that you told us about
4 earlier today.

5 A. I would agree were it not for the fact that they
6 are otherwise described.

7 Q. Okay. And tell us how this error happened. You
8 said that -- that there is -- is this a standard provision
9 that appears in your -- in your autopsy reports that was left
10 in?

11 A. Yes. That was a sentence that should have been
12 stricken from the template and it dropped in and was not
13 caught at the time it was originally typed.

14 Q. When you say template, there may be members of the
15 jury who don't know what a template is in the way that you
16 prepare autopsy reports. What is a template?

17 A. I have -- and I've even encouraged my staff each
18 time who have worked. We have a standard male and female and
19 infant autopsy protocol and that's in part to make sure that
20 you covered all the issues and you have wording -- and in
21 many instances, the things that are normally going to say the
22 same over and over and over again so that when you dictate
23 the same things over and over and over again, you have a
24 template that has all these normal things in it.

25 Then when you dictate the case, whether you're

1 doing the transcription or you have a transcriptionist, you
2 dictate the case and they make the adjustments in those
3 paragraphs to correlate with what you've dictated. In this
4 particular case, I did my own transcription, and I just
5 didn't catch it.

6 Q. And you didn't catch it when you went back and
7 reviewed that autopsy report now on several different
8 occasions? You reviewed -- let me be specific, Doctor. You
9 reviewed the autopsy report back when you were -- were
10 conferring with Dr. Laura Fulginiti who you mentioned --

11 A. Yes, sir.

12 Q. -- last time and we'll talk more about this
13 morning? You certainly reviewed it then?

14 A. Yes, sir.

15 Q. And, interestingly, you were talking to her about
16 fractures, so it might have been an occasion on which you
17 might have looked at that sentence, but I take it you didn't?

18 A. I didn't.

19 Q. Okay. You also we know looked at your autopsy
20 report when you conferred with the law enforcement
21 representatives who -- who came to you to ask you questions
22 about -- about possible theories and leads that might be used
23 in the case?

24 A. I don't know if we actually looked -- we're talking
25 about the documents at that point in time, but I had the

1 documents, yes.

2 Q. Let me be more precise. You talked to the
3 investigators about fractures?

4 A. I did.

5 Q. Fractures were important, and we're going to spend
6 time talking about them today. But you talked to the law
7 enforcement people about skull fractures and what -- what
8 possible implications might arise from them?

9 A. I did.

10 Q. And in doing so, you referred back -- must have
11 referred back to your report?

12 A. Actually, much of that I was referring back to my
13 memory, but I -- I had -- I had a report available.

14 Q. Okay. And then -- then we know that in October of
15 last year, you came to this courtroom and you testified in
16 one of the pretrial hearings in this case.

17 A. I did.

18 Q. Judge Lindberg was then the judge, and this hearing
19 was held before we actually commenced the trial.

20 A. That's correct.

21 Q. And in connection with that hearing, you testified
22 about your report?

23 A. I did.

24 Q. And you went back, and in advance of that
25 testimony, you looked at it? You must have?

1 A. I think so.

2 Q. Probably did. And as you remember, that hearing
3 actually went on for two days sort of like what we're doing
4 today? It wound up being an eight-day break? Do you
5 remember that?

6 A. Yes, sir.

7 Q. Just like this?

8 A. Pretty much.

9 Q. This is like a patterned contusion. We're doing
10 the same thing now that we did back in October, only slightly
11 differently today, we have a jury.

12 A. Yes, sir.

13 Q. But during those days, you had ample opportunity to
14 look at your autopsy report, and along the way, you corrected
15 things that you found to be wrong?

16 A. Yes, sir.

17 Q. Are there any other errors in your report that
18 you've identified?

19 A. I don't think so, but I could stand to be
20 corrected.

21 Q. Have you -- now that you've recognized that there
22 were three errors, have you gone back and taken a further
23 look at -- at all of the work that you did in this case to
24 make sure that there might not be any other significant
25 errors?

1 A. To the extent that I can. I'm somewhat limited in
2 that because I don't have access to the case file. All I
3 have is my copies, and I did in fact review all of my copies.

4 Q. And that would include things like photographs?

5 A. Yes, sir.

6 Q. Photographs taken and actually there are
7 photographs taken -- and we're going to talk a little bit
8 about those this morning -- photographs taken at various
9 times along the way?

10 A. Yes, sir.

11 Q. Okay. We'll cut back and talk about those and --
12 and look at whether there might have been -- been another
13 mistake.

14 But before we do that, I'd like to talk to you
15 a little bit about something you said last week about using
16 unsterilized clippers to clip the nails of the victim in this
17 case.

18 A. Yes, sir.

19 Q. That too was a mistake?

20 A. It's a procedural error, yes.

21 Q. It's a -- and with the benefit of hindsight, I
22 think you would -- you would agree with me that that's --
23 that's -- we could all call that a bad mistake? It's
24 certainly poor practice?

25 A. It was not good practice.

1 Q. Not good practice.

2 Let's talk about when these clippers were used
3 and what they were used for. You told us last time that on
4 the 3rd of July, you conducted an autopsy that began at about
5 3:45 in the afternoon. That was as -- as you know and as the
6 jurors all know the day after the horrible death that has
7 brought us here.

8 A. Yes, sir.

9 Q. The -- the autopsy itself in many ways was like
10 autopsies you've performed thousands of times over the years
11 in many ways?

12 A. In many ways.

13 Q. One of the first things you do in your autopsies is
14 you -- you look first for what you call and what we might
15 call trace evidence; correct?

16 A. Yes, sir.

17 Q. You do that before any of the other pretty graphic
18 things that happen in autopsies occur?

19 A. Yes, sir.

20 Q. You do a very full and careful visual scan of the
21 entire body?

22 A. Yes, sir.

23 Q. And you do that because you are looking for
24 anything that might be evidence, might help law enforcement
25 find the person or persons who could have had something to do

1 with the commission of this crime?

2 A. Yes, sir.

3 Q. And that's something you have done and learned way
4 back from your training in medicine and have done over your
5 entire career?

6 A. Yes, sir.

7 Q. Hard to imagine an autopsy in a homicide case that
8 wouldn't start out with an examination of the body looking
9 for trace evidence?

10 A. You would look, but obviously there's settings in
11 which the yield of the look is going to be much greater than
12 others, and so the diligence of that look is going to be
13 predicated upon the circumstances of the death. For example,
14 a long-distance sniper shooting, you're not going to have
15 much in the way of trace evidence.

16 Q. But this wasn't a long-distance --

17 A. No.

18 Q. -- homicide? And you -- you knew that from the
19 very first words you heard and the first observations you had
20 of this -- of this woman?

21 A. Agreed.

22 Q. So you were looking for the possibility that
23 there -- there might be -- be evidence that -- that could be
24 of use to law enforcement?

25 A. Yes, sir.

1 Q. And by the way, there were -- there were a good
2 number of law enforcement people present?

3 A. Yes, sir.

4 Q. How many?

5 A. I -- I don't even know. The report lists most all
6 the people, but I don't know if that's even all of them. I
7 know that there were -- there were some more who came and
8 went who are not listed on the -- on the report.

9 Q. We'd all be safe in saying that there were at least
10 six and maybe more?

11 A. Yes, sir.

12 Q. These are I call them law enforcement people. I
13 think you and I both in the vernacular often call them cops.

14 A. That's fine.

15 Q. You don't mean that -- when you use that term, you
16 don't mean it derogatorily?

17 A. No.

18 Q. You know that law enforcement people quite often
19 call themselves cops?

20 A. I've heard them.

21 Q. Have you heard them call themselves anything other
22 than cops?

23 A. Yes, sir.

24 Q. I don't want to know about it.

25 The law enforcement people are there for a

1 reason, aren't they?

2 A. Several reasons really.

3 Q. One of those important reasons is that they --
4 particularly those who are connected with the homicide
5 investigation itself, they want to learn what they can learn
6 that might assist them in their investigation?

7 A. Yes, sir.

8 Q. That's really the most important reason for them
9 being there, is it not?

10 A. I think so, but the implicit within that is not
11 only the learning of this particular case, but learning in
12 general for future applications in other cases as well.

13 Q. So they could actually have a little bit of a
14 learning experience that might assist them in a future case?

15 A. Yes, sir.

16 Q. And that's a good point. It's -- it's good for the
17 people in law enforcement to have an opportunity to gain some
18 experience that they may be able to use to properly solve the
19 next crime as well as to aid in the resolution of the case
20 before them?

21 A. Yes, sir.

22 Q. And they were, of course, interested in anything
23 you could tell them or that you could find in the course of
24 your examination beginning with the examination for trace
25 evidence?

1 A. I think it's a good assumption, yes, sir.

2 Q. Okay. When we say trace evidence, we -- we're
3 thinking about a number of things, and you mentioned some of
4 them. Hair being one?

5 A. Yes.

6 Q. Correct?

7 A. Yes.

8 Q. Biological fluids?

9 A. Sometimes.

10 Q. Sometimes. And sometimes not?

11 A. Frequently not.

12 Q. But certainly blood or skin from -- from a
13 perpetrator would always be something -- at least in a
14 homicide that appears to have occurred at close range would
15 be something you would be looking for?

16 A. Yes, sir. Attempt to look for it.

17 Q. We're going to talk some in this trial, have a
18 little bit already and are going to be talking more about
19 DNA. Some of us still think of DNA as -- as new science, but
20 in reality, DNA has been around as part of your career for
21 about 20 years now?

22 A. I guess we go back to Watson and Crick. It's
23 actually a little bit more than that, but the forensic
24 applications are more in that realm.

25 Q. Right. Forensic applications in terms of gathering

1 at autopsies blood and possible biological product, skin,
2 epithelial cells, things that you may be able to turn over
3 for -- for careful microscopic examination?

4 A. Yes, sir.

5 Q. But even before we had DNA, we -- we were always
6 interested in -- in finding blood that might help us identify
7 a perpetrator?

8 A. Yes, sir.

9 Q. Back in the old days of -- of blood typing, we were
10 still interested? Might produce something that would be of
11 use for an investigation?

12 A. Yes, sir.

13 Q. And so with that in mind, pathologists -- you and
14 forensic pathologists across the country as a general matter
15 have been -- have been on the lookout for -- for evidence and
16 are concerned about the possibility of contaminating
17 evidence?

18 A. Yes, sir.

19 Q. One thing you don't want to do in any autopsy,
20 whether it's a long-range shooting or whether it's
21 hand-to-hand combat, is do something in the autopsy that
22 might complicate the investigation down the road?

23 A. Correct.

24 Q. And so when -- when we think about these clippers,
25 we -- we have to think about them in the context of the

1 question whether those clippers might have in some way
2 contaminated the evidence in this case? And you mentioned
3 that --

4 A. Yes, sir.

5 Q. -- last time as a possibility.

6 But I think you know and will agree with us
7 that the risk of there being any significant contamination in
8 this case is extremely remote, extremely remote with respect
9 to those clippers?

10 A. I can't say that for sure. I -- I would like to
11 believe that.

12 Q. Let me ask you some questions.

13 A. Okay.

14 Q. I'm sure you would like to believe it, and let's
15 see what you've done or what you have learned that would
16 assist you in being able to believe that it is extremely
17 remote, almost to the point of being beyond the realm of
18 possibility, that those clippers could have contaminated the
19 evidence.

20 You had an assistant; correct?

21 A. I did.

22 Q. What was her name?

23 A. Karen Gere.

24 Q. Karen Gere is the person who -- who actually helps
25 you out and provides to you things like some of the

1 instruments that you might use during the course of an
2 autopsy?

3 A. Yes, sir.

4 Q. She also performs other functions for you, both
5 before and after an autopsy?

6 A. Yes, sir.

7 Q. Among those functions is cleaning the instruments?

8 A. Yes, sir.

9 Q. Part of her job and part of her job in July of 2008
10 was to make sure that the instruments that might be used in
11 an autopsy were clean?

12 A. Yes, sir.

13 Q. And how did she do that?

14 A. We used antiseptics soap solutions, and after any
15 case that we had performed, we -- we washed all the
16 instruments.

17 Q. Let's slow down. We use antiseptic soap?

18 A. Yes, sir.

19 Q. We wash the instruments, including the clippers?

20 A. No.

21 Q. You think not?

22 A. No. We -- 'cause --

23 Q. Hang on a second, Doctor.

24 A. Okay.

25 Q. I'll -- even though you've done more autopsies than

1 I've done examinations, you know how this process goes.

2 A. Yes, sir.

3 Q. I'll ask the questions and you can -- you can
4 answer them and if there's a question that needs to be
5 followed up on, the State can do that.

6 A. Yes, sir.

7 Q. Have you -- have you conferred with Karen Gere,
8 your assistant, about these clippers used in this case?

9 A. I have.

10 Q. And when did you do that, sir?

11 A. I think probably the first time was -- it was in
12 anticipation of or around the time of our October appearance
13 in court. There probably may even been times before that,
14 but certainly by then, I had talked to her.

15 Q. And have you -- have you -- have you talked to her
16 since then?

17 A. I talk to her quite frequently, but not
18 specifically about the clippers.

19 Q. You're aware that she was interviewed in this case?

20 A. Yes.

21 Q. And would you say that she was in error if -- if it
22 were to turn out to be the case that -- that she said she
23 regularly routinely washed all of the instruments, including
24 the clippers, with warm soapy antiseptic water?

25 A. I think that needs to be amplified.

1 Q. Okay. Well, let me ask you another question.

2 Isn't it also true that -- that Karen Gere was trained and
3 did actually scrub the instruments?

4 A. Yes, sir.

5 Q. That is usually brushed to scrub them?

6 A. Yes, sir. A little nylon brush.

7 Q. And so in this case, when you talked about pulling
8 a pair of clippers out of the instrument drawer, you weren't
9 thinking about pulling out a pair of dirty clippers?

10 A. No, sir.

11 Q. You had no reason to think that those clippers were
12 anything other than clean?

13 A. Correct.

14 Q. They hadn't been sanitized, but they were clean?

15 A. Yes, sir.

16 Q. And you also know that -- that after a question was
17 raised about whether those clippers might not have been
18 sanitized, an inquiry occurred with respect to whether there
19 might have been some contamination? You're aware of that,
20 aren't you?

21 A. Yes, sir.

22 Q. You're aware that -- that Karen Gere went back and
23 looked at other autopsies? Did you know that?

24 A. I -- I had that conversation with her. She told me
25 that she did. That's the way that I know that she did.

1 Q. She went back and looked at -- at autopsies that --
2 that could be identified where it was at least possible that
3 those clippers might have been used?

4 A. Yes, sir.

5 Q. And what she found was that there was no occasion
6 upon which those clippers were used in which there was any
7 reasonable possibility that DNA from someone in a prior
8 autopsy could have been transferred to the body of this
9 woman?

10 A. I think that's also correct.

11 Q. Okay. But, nonetheless, I think you recognized
12 that -- that having clippers that were not sanitized was bad
13 practice?

14 A. Yes.

15 Q. You've already said that.

16 A. Yes, sir.

17 Q. And so -- so now those -- those kinds of things
18 can't happen?

19 A. I can't say anything that happens today. I have no
20 knowledge about things today.

21 Q. Well, even though you have no knowledge of things
22 that happen today, you told us last week that you were aware
23 that there is now a protocol in the Yavapai County Medical
24 Examiner's Office? At least that's what I thought I heard
25 you say.

1 A. No. The -- the only thing relative to clippers,
2 the -- before I left, we requested that there be packaged,
3 unopened, fresh clippers to be put into use which would be
4 the protocol, but I don't know whether that's followed or
5 not.

6 Q. And don't -- didn't you also tell us that it was
7 your understanding that the clippers were used once and then
8 never used again?

9 A. That's the practice.

10 Q. That's what you said.

11 A. Yes, sir.

12 Q. And as far as you know, that is now the practice in
13 Yavapai County?

14 A. Yes, sir.

15 Q. So in the course of -- of giving some thought to --
16 to whether the use of these clippers might have created a
17 possibility of contamination, have you investigated the
18 question with respect to what was found on those fingernails?

19 A. I've never been supplied the information of what
20 was found.

21 Q. Well, you certainly know some of the things about
22 what was found.

23 A. Yes, sir.

24 Q. Let's break it down. You certainly knew that when
25 you looked at the -- at the right hand of the victim, you

1 found and you described for us last week a broken fingernail?

2 A. Yes, sir.

3 Q. Fractured is the word you used.

4 A. Yes, sir.

5 Q. A pretty deep fracture all the way down to -- to
6 the base?

7 A. Well, it's the interface of the base of the nail,
8 in the quick in lay terms.

9 Q. Right. But it's not the kind of thing that you as
10 a trained forensic pathologist would look at and say, oh,
11 that's irrelevant?

12 A. No.

13 Q. It looked to you like it was indeed the one thing
14 and the only thing that you could see that caused you to
15 think that there could have been a struggle here, a struggle
16 that went two ways?

17 A. Other than the defensive injuries, yes.

18 Q. And we'll come back and talk about the things that
19 you're talking about as defensive injuries, again, the two
20 parallel lines on the forearm, the right forearm of the
21 victim.

22 A. Yes, sir.

23 Q. But when you saw the broken fingernail, that caused
24 you to think that there may have been a struggle, a close
25 hand-to-hand struggle?

1 A. That's a possibility, yes.

2 Q. In which a -- and it seemed like a reasonable
3 enough possibility for you to want to pursue it?

4 A. Yes, sir.

5 Q. And that caused you to look with care at both
6 hands?

7 A. Yes, sir.

8 Q. And in particular to look with care at -- at the
9 underside of the fingernails and the top of the fingernails
10 for that matter?

11 A. Yes, but I didn't -- I look at them with visual.
12 I don't examine -- I don't look at them in the microscope.
13 I just look at them grossly and -- and guide my sampling
14 based upon what I see.

15 Q. Well, and you -- you described in your autopsy
16 report what you saw --

17 A. Yes, sir.

18 Q. -- correct?

19 And Exhibit 808 when you're talking about
20 your -- your preliminary evaluation for trace evidence,
21 you -- you say -- and this is at the bottom of page 2 of
22 Exhibit 808 under Trace Findings, you say: "The right hand
23 is covered with dried blood, however the left hand has much
24 less dried blood and swabs are taken of the surfaces of the
25 left hand, air dried and sealed."

1 A. Yes, sir.

2 Q. "There is dried brown material beneath some of the
3 fingernails and one fingernail appears to be fractured."

4 A. That's all correct.

5 Q. Do you remember seeing brown material?

6 A. Yes, sir.

7 Q. A pretty substantial amount of brown material?

8 A. Yes, sir.

9 Q. And brown material that as your report suggests
10 might be more than just blood?

11 A. I call it brown material. The thing you're worried
12 about and concerned about is that it's blood, but it could be
13 more than blood.

14 Q. It could be more than blood. And one of the
15 reasons you want to have those fingernails clipped and
16 preserved is so that a laboratory somewhere, not your
17 laboratory, but a laboratory somewhere else can -- can look
18 at those fingernails and do appropriate DNA testing?

19 A. Yes, sir.

20 Q. And you know in this case that was in fact done?

21 A. I understand it was done, yes, sir.

22 Q. You know that the fingernails on the left hand and
23 the right hand were clipped and bagged and sent to the
24 Arizona Department of Public Safety Northern Arizona Crime
25 Lab?

1 A. That's my understanding, yes, sir.

2 Q. Have you had occasion to look at those fingernails
3 at all since the day of the autopsy?

4 A. No, sir.

5 Q. In your review of materials in preparation for this
6 case, you haven't look at any of the photographs?

7 A. No, sir.

8 Q. Bear with me just a moment.

9 (Brief pause.)

10 MR. HAMMOND: Your Honor, might I approach the
11 witness?

12 THE COURT: Yes.

13 BY MR. HAMMOND:

14 Q. Doctor, I'm going to hand you what we've marked as
15 Exhibit 2955. And I'm going to tell you that that's a
16 photograph taken by -- by -- by our team from the evidence in
17 this case and identified to us as the fingernails of the left
18 hand.

19 A. Okay.

20 Q. Okay. Have you -- have you any reason to doubt
21 that what I'm telling you is -- that it is true, that those
22 are the fingernails of the left hand?

23 A. No.

24 Q. They came off in six pieces. Do you remember that?

25 A. I'm not surprised, because that's -- when you make

1 the cut across, sometimes you have to make a second cut.

2 Q. And you can see under these -- even in this
3 picture, you can see that there is a fair amount of brown
4 material?

5 A. Yes, sir.

6 MR. BUTNER: Judge, I'm going to object to
7 that last question and move to strike. He asked the witness
8 to testify from the exhibit which is not in evidence.

9 MR. HAMMOND: Your Honor, I move the admission
10 of Exhibit 2955.

11 MR. BUTNER: Objection. Foundation.

12 THE COURT: Sustained.

13 MR. BUTNER: And my previous objection, your
14 Honor, on motion to strike?

15 THE COURT: Overruled.

16 MR. HAMMOND: Your Honor, because of the
17 ordering of witnesses in this trial, the testimony of a
18 witness who would verify that this is in fact a photograph
19 taken from property in evidence of the fingernails provided
20 by the State to us will happen at a later time. I can
21 certainly avow to the Court that -- that in fact that is what
22 this photograph is.

23 THE COURT: Mr. Butner?

24 MR. BUTNER: That's still the same objection,
25 Judge. This is the first time I've seen this photograph.

1 THE COURT: Counsel, I need to have a side
2 bar.

3 Ladies and gentlemen, feel free to stand and
4 stretch while we do this.

5 And I'll see counsel at side bar. Thank you.

6 (Discussion off the record.)

7 THE COURT: Thank you, ladies and gentlemen.

8 Mr. Butner.

9 MR. BUTNER: Judge, are we back on the record?

10 THE COURT: We are back on the record.

11 MR. BUTNER: Okay. I confirmed the
12 disclosure, and subject to the avowals of counsel, the State
13 will withdraw its objection at this time.

14 THE COURT: It's 2955?

15 MR. HAMMOND: Yes, your Honor.

16 THE COURT: 2955 then is admitted.

17 BY MR. HAMMOND:

18 Q. See if we can get a little closer look at that.
19 It's not perfectly in focus, but I think it gives you a
20 pretty good idea. There -- there is a good deal of brown
21 material under there?

22 A. Yes, sir.

23 Q. Doctor, I will represent to you that by the time
24 that this photograph is taken, those fingernails have already
25 been -- been swabbed one time by the Department of Public

1 Safety. And we'll be hearing more about that as the case
2 goes on. And they eventually are swabbed again by another
3 laboratory.

4 A. Okay.

5 Q. And I know that you've been told that -- that the
6 results of this swabbing confirmed that there was male DNA
7 under those fingernails.

8 A. Again, I understand there's DNA -- male DNA under
9 the fingernails. I don't know left or right. I don't know
10 if these are left or right, but that's sort of a separate
11 issue.

12 Q. You know that -- that -- that the DNA found under
13 those fingernails, and I'll tell you it's the left hand,
14 turned out to -- to be what is known as evidence item 603.

15 A. I'll accept that. I just don't know that.

16 Q. Okay. And that -- that -- that that -- that
17 evidence item turns out to be what's called a full DNA
18 profile.

19 MR. BUTNER: Objection, your Honor. He's not
20 even asking him questions. Counsel's testifying. To form.

21 MR. HAMMOND: I'm asking him to -- to confirm
22 that -- I'm sure he knows this. It's inconceivable that --
23 that he wouldn't know by now.

24 THE COURT: Sustained as to form of question.

25 MR. BUTNER: Thank you.

1 BY MR. HAMMOND:

2 Q. You are aware that -- that male DNA was found in
3 this case?

4 A. I have been told that, yes, sir.

5 Q. And you -- you -- you certainly know and have known
6 for a very long time that that male DNA was found under the
7 fingernails?

8 A. Yes, sir.

9 Q. Fingernails that you clipped?

10 A. Yes, sir.

11 Q. You certainly know that?

12 A. Yes, sir.

13 Q. You've talked to law enforcement about that?

14 A. Yes, sir.

15 Q. On several occasions?

16 A. I wouldn't say several, but...

17 Q. Well, you've talked about it with law enforcement
18 enough to know that there was male DNA found from a -- from
19 an unidentified perpetrator?

20 MR. BUTNER: Objection.

21 BY MR. HAMMOND:

22 Q. That you certainly have known for a long time?

23 MR. BUTNER: Objection. Argumentative, Judge.
24 And asked and answered and vague and ambiguous. He doesn't
25 even specify which fingernails, whether it's the left or the

1 right hand.

2 THE COURT: Objection is sustained.

3 MR. BUTNER: Thank you.

4 BY MR. HAMMOND:

5 Q. You also know, Dr. Keen, that no DNA from Steve
6 DeMocker has been found under any fingernail?

7 A. I'm not aware of any that has been.

8 Q. And, in fact, you've been told that none was found?

9 A. I don't know that I've been told that. I have not
10 seen the DNA results, and so I don't really have an opinion
11 as to those results.

12 Q. So something else then that you may not have an
13 opinion about is whether it is even remotely possible that
14 the use of an unsanitized clipper could have contributed to
15 the DNA under the fingernails?

16 A. No. I could have an opinion about it. If there is
17 some, that is a possible source of it, yes. But I don't --
18 without knowing what it is, I don't know what I'm opining on.

19 Q. When you say it's a possible source, would you
20 agree with me that it is a very remote possible source?

21 A. I don't know. I just don't know.

22 Q. Okay. But you're not going to sit here and tell us
23 that -- that it's in any way your opinion that this
24 particular mistake is one that could have compromised the
25 integrity of this case? You're not going to say that?

1 A. The mistake of?

2 Q. The mistake of using clippers that by your own
3 statement when you were here before is not the best practice?

4 A. No, I'm not saying that that caused it.

5 Q. Okay. And indeed you're not even saying that it
6 was in any way likely to have been a significant contributor
7 in this case? You don't think that at all, do you?

8 A. No. I have some reservations both pro and con.

9 Q. And -- and part of the reason that you have
10 reservations is that you know that the practice here was not
11 the best practice?

12 A. I agree to that. It was not the best practice.

13 Q. But we're not talking about clippers that could
14 have contained some significant amount of biological product
15 enough so that for instance you could see it? You're not
16 talking about there being skin or blood or something else
17 under those clippers when they were pulled out of the drawer?

18 A. No, I'm not saying that at all.

19 Q. So if there -- if there was any possible
20 contamination, we're talking about microscopic contamination?

21 A. I think that's a fair characterization, yes, sir.

22 Q. Not visible to the human eye?

23 A. Correct.

24 Q. And -- and probably not in an amount large enough
25 to have been a significant contributor to the very fabulous

1 amount of DNA found in this case?

2 A. Don't know --

3 MR. BUTNER: Objection to the form of the
4 question, Judge. Argumentative.

5 THE COURT: Overruled.

6 You may answer.

7 THE WITNESS: I don't know. You've
8 characterized it -- without knowing the results, I don't know
9 how to characterize it nor how to interpret it.

10 BY MR. HAMMOND:

11 Q. Dr. Keen, when we talk about possibilities and the
12 possibility of a -- of a mistake or -- or either the -- the
13 contamination of -- of a -- of a piece of evidence in a case,
14 you know because you're an experienced professional that --
15 that mistakes like that can happen?

16 A. Yes, sir.

17 Q. But it's -- it's a very rare occurrence in your
18 experience or in the experience of most forensic pathologists
19 that -- that an error of contamination results in -- in some
20 significant error occurring in the course of the case?

21 A. Yes, sir.

22 Q. And in your experience, there have been
23 relatively -- thankfully relatively few of those?

24 A. I think that's a fair characterization, yes, sir.

25 Q. Just before we go on from the -- from the trace

1 evidence review, you also were looking at that time for --
2 for any other evidence that could be collected and passed on
3 to the scientific laboratory?

4 A. Other trace evidence? Yes, sir.

5 Q. Well, in addition to the other categories of trace
6 evidence.

7 A. I think we were pretty comprehensive in the typical
8 things we were doing. We were looking for blood smears. We
9 look for fingernails. We look for the clippings. We look
10 for further traces of things that we saw. We collect the
11 hairs which we saw on the surfaces. And we -- we gathered up
12 the clothing intact. I'm not sure what else we would be
13 looking for.

14 Q. But the -- and so -- so in particular with respect
15 to -- to items of hair, you did make a special effort to make
16 sure that insofar as you could see in your close visual
17 inspection that there might be any hairs on the body, you
18 collected those?

19 A. Yes, sir.

20 Q. And among the hairs you collected, I think you --
21 you may have said that some of those hairs turned out to be
22 animal hair?

23 A. I said to my -- they appeared that they might well
24 be, but, again, I didn't look under the microscope to make
25 that final determination.

1 Q. And you were never advised later that any of those
2 hairs either were or were not human?

3 A. I've not seen any of the trace evidence reports,
4 no, sir.

5 Q. And you haven't been told about them in your
6 conversations with other members of law enforcement?

7 A. I -- if I have, I don't recall them.

8 Q. Before you -- you began doing the things that are
9 necessarily done in an autopsy, you looked at the -- what you
10 call lacerations, particularly lacerations of the scalp?

11 A. Yes, sir.

12 Q. When you use the word laceration, just so that we
13 have a common frame of reference, how do you define the term?

14 A. Well, a laceration is a blunt force injury that
15 tears and separates surfaces, particularly the skin. It's a
16 soft tissue injury that is torn. It has several features,
17 but it's a blunt force impact that has torn it apart.

18 Q. So you distinguish a laceration, for instance, from
19 an abrasion?

20 A. Yes. Lacerations frequently may have abraded
21 areas. There may be an abrasion on the area. What
22 characterizes the difference is the breach in the -- in the
23 substance. If you're talking about skin, the fact that it
24 tears apart, that makes it a laceration. If it's just
25 scuffed, it just would be an abrasion.

1 Q. Okay. And -- and you have talked about here both
2 about lacerations and abrasions?

3 A. Yes, sir.

4 Q. You referred to the marks on the forearm as
5 abrasions?

6 A. Contusions.

7 Q. And contusions. Thank you.

8 A. The third category of blunt force injury.

9 Q. And then you referred to the -- to the head
10 injuries as lacerations?

11 A. Yes, sir.

12 Q. You were -- you were also interested in the course
13 of your autopsy in fractures to the skull of the victim?

14 A. Yes, sir.

15 Q. And indeed in the course of the autopsy, you --
16 you -- as you told us last -- last time you were here, you go
17 through a procedure where -- where after you look at the
18 lacerations in place, you take at least a preliminary look at
19 the -- at the bones of the skull itself?

20 A. Yes, sir.

21 Q. And that's what you did here first on the 3rd of
22 July?

23 A. Yes, I examined both the -- the scalp, the
24 fractures of the skull, and of the damage to the underlying
25 brain.

1 Q. And -- and we're going to talk a little bit more
2 about that, but as you -- as you looked at the skull itself
3 and, of course, in order to look at the skull, you have to
4 reflect I think the word you used the skin covering?

5 A. Eventually you do. In this particular case, the
6 lacerations were sufficiently numerous that I got pretty good
7 looks before I ever made any alterations in the integrity of
8 the scalp. It's already -- I was able to examine and know
9 that I was dealing with a lot of fractures before I ever did
10 any manipulation of the scalp.

11 Q. There were places where you could in fact see the
12 skull below the lacerations in the scalp?

13 A. Through the holes in the lacerations.

14 Q. And you, in fact, noted that on an occasion or two
15 in your autopsy report?

16 A. I think so.

17 Q. And then you -- after making your observations of
18 those lacerations, you did go forward and to use your word
19 reflect --

20 A. Yes, sir.

21 Q. -- the scalp?

22 A. Which means for clarification I had to make an
23 incision to free it up so I could peel it essentially off the
24 bone surfaces.

25 Q. And once you had done that, you found that there

1 were significant fractures and you could see them before you
2 started, but you found there were significant fractures
3 underneath the layer of skin?

4 A. Yes, sir.

5 Q. And one thing that -- that occurred to you at that
6 time was that -- that you ought to bring in another
7 specialist to take a look at these fractures?

8 A. When we -- when we were doing the exam, yes, we
9 decided that we could do that as well.

10 Q. Okay. Who is we?

11 A. We? I discussed it with --

12 Q. Let me get the time again. You're --

13 A. Okay. We're talking --

14 Q. -- back on the 3rd of July?

15 A. We're talking July 3rd.

16 Q. Okay.

17 A. And in conversations with the Sheriff's Office
18 investigators and myself, that's when we made the decision to
19 seek additional input.

20 Q. And the person from whom you were planning to seek
21 additional help was Dr. Laura Fulginiti?

22 A. Yes, sir.

23 Q. Dr. Laura Fulginiti is someone who specializes in
24 what is called forensic anthropology?

25 A. Yes, sir.

1 Q. She does other things, but that's her labeled
2 specialty?

3 A. She's -- she's recognized as a board-credentialed
4 forensic anthropologist, yes.

5 Q. And you've known her and worked with her from time
6 to time since sometime in the early 1990s?

7 A. As soon as she got out of graduate school.
8 Actually, I started working with her very early in her
9 career.

10 Q. And you came to have a high regard for the skills
11 that she possesses and the work she does as a -- as a
12 forensic anthropologist?

13 A. Yes, sir.

14 Q. So you and the officers together made a decision
15 that you would send the body for further examination to her?

16 A. Yes, sir.

17 Q. Now, she's in Phoenix?

18 A. Yes.

19 Q. And so you had to make arrangements for the
20 transportation of the body from Prescott down to Phoenix?

21 A. Actually, I did the transportation.

22 Q. You said that last time, and I wondered you
23 actually did it yourself?

24 A. I did.

25 Q. People tell you you shouldn't be so curious as to

1 ask a question like this, but how did you do that?

2 A. Among the vehicles that I own, I have pickup
3 trucks. And the body was in a body bag, and it was late in
4 the day, not a matter of environmental situation, so I
5 transported the body and I took it directly to the Forensic
6 Science Center and delivered it.

7 Q. In the back of your pickup truck?

8 A. Yes, sir.

9 Q. And then you delivered it personally to
10 Dr. Fulginiti or no?

11 A. No. The mechanism is I delivered through the
12 sallyport of the Forensic Science Center and contacted
13 whoever was the receiving person, the technicians that were
14 on duty to receive, and released it to them into the cold
15 storage area to be reviewed by Dr. Fulginiti. Fulginiti was
16 not there in the evening at the time I released it so it
17 was -- it was cataloged in as a routine admission to her area
18 of the morgue.

19 Q. And -- and what you were hoping was that she would
20 then be able to look at the fractures of the -- of the skull
21 and be able to -- to do a reconstruction?

22 A. Yes, sir.

23 Q. So that she could -- could assist you in -- in
24 determining anything you could find out, but particularly
25 information about -- about what might have caused those

1 fractures?

2 A. Yes, sir.

3 Q. But it didn't work out at this time that -- that
4 she would do the examination?

5 A. That's correct.

6 Q. Instead, the -- the body of the victim was brought
7 back to Yavapai County?

8 A. Yes, the body was returned to Yavapai County
9 arranged with APT, our transport service, to make the
10 transport back to Prescott.

11 Q. Can you tell us what the reason was why the
12 examination was not done at that time?

13 A. No.

14 Q. Did it have something to do with what you might
15 call the delays that sometimes occur in bureaucracies?

16 A. I won't opine, but I was never told why. I was
17 just told what. And since I was not told why, I won't make
18 an opinion as to why.

19 Q. Because we know later, you had -- had a very good
20 number of conversations with Dr. Fulginiti?

21 A. We've always been friendly.

22 Q. And later, we know that -- that she did some
23 significant work in this case?

24 A. Yes, sir.

25 Q. And you've reviewed the product of that work?

1 A. I have.

2 Q. But when the -- when the body of the victim was
3 taken down by you and then brought back, by that time,
4 nothing by way of a reconstruction had been done?

5 A. That is correct.

6 Q. And you thought that doing some kind of
7 reconstruction at some point would be an important thing
8 because of your views about -- about the things you can learn
9 from fractures?

10 A. Yes, sir.

11 Q. And indeed it's your opinion as you stated here
12 last week or the last time that you were here that you think
13 sometimes the -- the skull itself can be more important at
14 least in terms of communicating evidence than the lacerations
15 on the -- on the scalp themselves?

16 A. Yes, sir.

17 Q. And so you -- you were of a mind and the law
18 enforcement people that you conferred with were of a mind
19 that it would be a good thing to do a reconstruction?

20 A. Yes, sir.

21 Q. But it hadn't been done?

22 A. It had not been done.

23 Q. Okay. And then on the 15th of July, several of
24 those law enforcement people up here contacted you?

25 A. Actually, it turned out to be the 14th.

1 Q. Is it the 14th?

2 A. Yes, sir.

3 Q. This is the debate we had last time about the
4 precise date.

5 A. I didn't know the date. In the interim, I pulled
6 my own photos and the photos actually bear a number and they
7 bear the date and it's dated July 14th.

8 Q. And indeed I think there may be one photograph
9 where you can actually see the whole date. It may not have
10 been one of those introduced, but I think --

11 A. I have several.

12 Q. So on the 14th, you're contacted by members of
13 the Sheriff's Office?

14 A. They meet with me at the Medical Examiner's Office,
15 yes.

16 Q. Did they contact you in advance and tell you why
17 they want to meet with you?

18 A. Yes, there is a contact, but I can't tell you who
19 the contact, but we agreed to meet them and to do our
20 comparisons.

21 Q. Did they ask you where the body of the victim was?

22 A. They may have. I don't -- I don't recall.

23 Q. Did the contact with the Sheriff's Office occur
24 after the body of the victim had already been returned to
25 you?

1 A. Yes, sir.

2 Q. When it was returned to you, did you advise someone
3 in the Sheriff's Office that the body was back in your
4 facility?

5 A. I'm sure I did. I don't know whether I did
6 personally or whether the office staff did, but that
7 information was conveyed.

8 Q. But you knew that -- that the -- that the Sheriff's
9 Office investigation was still underway?

10 A. Yes, sir.

11 Q. And -- and the information was communicated to you
12 that in one way or another that the Sheriff's Office wanted
13 to -- to look at the -- the skull, head of the victim to --
14 to do a little comparison?

15 A. Yes, sir.

16 Q. A comparison between a -- a golf club that you
17 displayed here last week and -- and the injuries of the
18 victim?

19 A. Yes, sir.

20 Q. They actually wanted to do something like what you
21 were hoping Dr. Laura Fulginiti could help with?

22 A. That would have been the original hope, yes.

23 Q. But she wasn't available at that time, and the law
24 enforcement people wanted to -- to bring in their golf club?

25 A. They wanted to bring in the golf club, and I also

1 wanted to try a technique of my own.

2 Q. You wanted to see if maybe you could assist in the
3 reconstruction?

4 A. Yes, sir.

5 Q. And so that's in fact what you did we now know on
6 the 14th of July, 11 days after -- after your autopsy?

7 A. Yes, sir.

8 Q. Okay. And in preparation for -- for this event,
9 did you go back and review any -- any of your materials in
10 the file?

11 A. I -- I don't think so. I'm not aware of it.

12 Q. Did you go back and look at -- at any of the
13 photographs taken during the autopsy?

14 A. I'm sure I did that.

15 Q. You're sure you looked at those?

16 A. I'm sure I had seen those.

17 Q. Okay.

18 A. But I don't know specifically that I looked at
19 other file contents.

20 Q. Okay. You might not have looked back at the
21 report, but at least you're sure that you looked at the
22 photographs?

23 A. Yes.

24 Q. And there were photographs taken -- actually I
25 think were some taken by you at the autopsy?

1 A. Some taken by me or Karen. It sometimes depends on
2 who was gloved at the time or not. But on my camera, we took
3 some. Some were also taken by law enforcement.

4 Q. And so you at least had those photographs to look
5 at?

6 A. I had mine, yes.

7 Q. Okay. And so with some number of members of law
8 enforcement present, you removed the body of the victim from
9 the locker?

10 A. Yes, sir.

11 Q. And you again reflected the scalp?

12 A. Yes, sir.

13 Q. It had been placed back in -- in what might be its
14 typical location before you sent it down?

15 A. Yes. I had returned it to basically its anatomic
16 position although altered by injuries.

17 Q. Okay. But -- but now with law enforcement members
18 looking on and with the golf club available to you, you -- we
19 might say you re-reflected the scalp so that you could -- you
20 could look at the underlying structure of the bones of the
21 skull?

22 A. And I'm going to go by memory for a moment, but I
23 don't know -- I don't recall exactly whether I began before
24 they arrived or after they arrived. I know there were some
25 things I was doing to get ready before they arrived and

1 particularly in reference to how I was going to reconstruct
2 the arch of the skull and I don't know -- I may have actually
3 begun before they arrived. But at any rate, it was close
4 proximity, and while that was ongoing, they did arrive and we
5 did reconstruct.

6 Q. And part of that was to use your words, you
7 repositioned the skull bone fragments over the surface of
8 a -- of a styrofoam ball and papier-maché that you had
9 created?

10 A. Yes, sir.

11 Q. So what you did was you took this styrofoam ball,
12 you put papier-maché on it to -- to change the form a little
13 bit?

14 A. You want me to explain real briefly what I did?

15 Q. Absolutely.

16 A. I had already removed the brain at the time of the
17 autopsy. I wanted now to replace the substance of the brain
18 to give some substance to the skull itself. So I took the
19 styrofoam ball and selected one that was as close as I could
20 find to the size that I needed, made a couple appropriate
21 cuts in the shape so it would fit into the base of the skull
22 and then I put a layer of the papier-maché over it to make up
23 the difference between the dimensions of the styrofoam ball
24 and what might have been the contour of the skull and then
25 moved the bone pieces over the surfaces to -- to give a sense

1 of realignment of those pieces.

2 Q. And this is -- is now to be sure not what
3 Dr. Fulginiti would have done?

4 A. What she would have done and did do then is
5 actually to deflush the wound completely and then glue them
6 back together, fit them back together like a puzzle and glue
7 them back.

8 Q. And she -- she ultimately cleans very carefully all
9 of the pieces and puts them back together much as you would a
10 puzzle?

11 A. Yes, sir.

12 Q. And you were -- you were not following what -- what
13 might be called the usual forensic anthropology method, but
14 you were employing a method of your own?

15 A. Yes, sir.

16 Q. And this is something you're doing at that point
17 without knowing whether Dr. Fulginiti is going to at some
18 future time be employed to assist?

19 A. I do not know at that instant whether she will or
20 will not be doing.

21 Q. You are -- you are still holding the body so that
22 it is -- it is certainly still -- still quite -- quite
23 possible and ultimately it turns out that Dr. Fulginiti is --
24 is able to help?

25 A. Yes.

1 Q. But at this time, you're -- you're doing it
2 essentially on your own?

3 A. I'm doing it on my own, but I'm also taking --
4 taking a couple of measures here to be sure that in case
5 there is the future forensic examination, I'm not physically
6 altering the bones.

7 Q. You're doing this as a service to the
8 investigators, are you not?

9 A. Well, partially in service to them and partially in
10 answer to my own curiosity in my investigation of the case.
11 I had already formed an opinion, and I just -- I was
12 validating or refuting the consistency of my opinion by what
13 I was able to see.

14 Q. Let me guess. Is the opinion you were validating
15 that -- that the injuries to the head of this victim were
16 likely caused by a golf club?

17 A. Yes, sir.

18 Q. And so when the Sheriff's people came in with a
19 Callaway Big Bertha Number 7, your goal was to see whether
20 you could validate an opinion you'd already formed that --
21 that a golf club could have caused the fractures that you
22 saw?

23 A. I think that's a fair characterization, yes, sir.

24 Q. Now, you told us last time that you had no
25 particular golf club in mind?

1 A. That is correct.

2 Q. You said at one point I think that -- that the idea
3 of a -- of a wood as opposed to an iron somehow seemed more
4 correct to you?

5 A. Yes. The driver kind of shape of the contusion was
6 what was leading me in that direction.

7 Q. And the contusion we'll talk about later, but when
8 you say contusion now, you're talking about the injury down
9 above the right elbow?

10 A. Yes.

11 Q. But -- but the idea that a golf club caused the
12 injuries to the scalp and to the underlying structure of
13 the -- of the skull was a question that you were
14 investigating here?

15 A. Yes, sir. And also trying to make that very
16 distinction as to what kind, what shape, what size, if it was
17 in fact a club, what kind of club could have done it.

18 Q. So you were interested in kind of a close
19 inspection if you will of the -- of the fragments of the
20 skull against the head of a golf club?

21 A. Yes, sir.

22 Q. Not having formed any particular opinion about what
23 kind of golf club it was other than the head shape which was
24 a lead you -- you obtained you say from looking at the elbow?

25 A. Well, initially obtained from the contusion of the

1 iron, but also subsequently confirmed from the major --
2 primarily the right-sided laceration and fracture of the
3 skull.

4 Q. You have produced no report about this work.

5 A. About that attempt -- the -- what I've just
6 described today?

7 Q. Yes.

8 A. No, I have not.

9 Q. You typically when you do autopsies or do
10 supplemental work on an autopsy, you do reports?

11 A. I do.

12 Q. You've been doing reports for decades now?

13 A. Yes, sir.

14 Q. No report was done here. You often dictate notes
15 as you go along?

16 A. Actually, I don't have a detailed report, but let
17 me --

18 Q. You have a single paragraph at the end of your
19 autopsy that -- that -- that is the last thing we see in
20 Exhibit 808.

21 A. The -- I don't have a report of what I did. I do
22 have a supplemental report that summarizes what I did and
23 what Dr. Fulginiti did, and that was produced on
24 August 19th.

25 Q. And that report occurs long after Dr. Fulginiti

1 has -- has -- has acquired the head and skull of the victim
2 and has done her work?

3 A. And returned it back to me.

4 Q. And returned it back to you. But at no point did
5 you do -- you certainly didn't do what you typically do a
6 contemporaneous note of what you are doing as you do it?

7 A. And I didn't, and there's a reason why.

8 Q. What is the reason why?

9 A. Because we were going to try one more time to have
10 Dr. Fulginiti have a look at it and since there was going to
11 be what is a more standard and shall we say traditional,
12 acceptable evaluation of bone pathology, I was going to defer
13 to that report.

14 Q. So because -- I thought you had said earlier that
15 at the time you did this work, you didn't know whether
16 Dr. Fulginiti was going to be able to help you or not?

17 A. And I --

18 Q. Did I misunderstand you?

19 A. No, you didn't misunderstand me. Because I still
20 didn't know at that point, but there was still -- an inquiry
21 was going to be made and in conversations I had with the
22 Sheriff's Office, they still wanted Fulginiti to do the
23 examination and I said, well, see if you can be more
24 successful than I can.

25 Q. So let me see if I understand this. Because you

1 knew that the Sheriff's Office still wanted to have
2 Dr. Fulginiti do it, you thought it was unnecessary for you
3 to -- to write your own contemporaneous note --

4 A. Yes, sir.

5 Q. -- about the work you were doing?

6 A. Yes, sir.

7 Q. You usually dictate things as you do them?

8 A. And if I were to actually manipulate and change and
9 alter, I would have done that, but since I wasn't, all I was
10 doing was fitting the pieces over the surfaces, I didn't
11 think that that needed any further report.

12 Q. Because you were at least certain that there was no
13 way doing what you could do that you might be getting it
14 wrong?

15 A. Repeat that.

16 Q. Did you think about that?

17 A. Repeat your question.

18 Q. Did you think about getting it wrong?

19 A. I always think about getting it wrong.

20 Q. Did you think about it that day?

21 A. Yes, sir.

22 Q. Did you think about having a record of what you
23 were doing might assist someone later in determining whether
24 you were getting it wrong?

25 A. Actually, the very best record that we could have

1 on that day we did have. While I was not making a verbal
2 record, we were making a photographic record.

3 Q. You were making a -- a photographic record that
4 would show us all as you've done in this courtroom exactly
5 what you did?

6 A. Yes, sir.

7 Q. And what conclusions you were able to draw from
8 what you did?

9 A. Yes, sir.

10 Q. So having photographs, you felt that at this time
11 maybe it wasn't necessary for you to write an additional
12 report explaining what you were doing?

13 A. Yes, sir.

14 Q. Even though what you were doing by your own
15 explanation is -- is atypical, it's not what forensic
16 pathologists usually do?

17 A. That is correct.

18 Q. It is not what forensic anthropologists typically
19 do?

20 A. That's also correct.

21 Q. But -- but you felt that it might be of assistance
22 to law enforcement here and you might learn something from it
23 so you went ahead and did it?

24 A. I think that's fair.

25 MR. HAMMOND: Your Honor, this would be a good

1 time for a break.

2 THE COURT: Thank you. Ladies and gentlemen,
3 we'll take a morning recess, about 15 minutes, so please
4 reassemble at 10 till and remember the admonition. Thank
5 you.

6 (Recess from 10:31 a.m. to 10:55 a.m.)

7 THE COURT: Please be seated. Thank you.

8 The record will show the presence of the
9 defendant, all of the attorneys, and the jury is present.

10 Dr. Keen is on the witness stand.

11 Mr. Hammond.

12 MR. HAMMOND: Your Honor, I -- I have put up
13 the screen because we're going to be showing several
14 photographs as happened last week, but I just began to wonder
15 whether you can see the screen.

16 THE COURT: I can, yes. If I move this way, I
17 can see.

18 MR. HAMMOND: Okay. Good.

19 BY MR. HAMMOND:

20 Q. Dr. Keen, before we move back to -- to the
21 reconstruction that -- that you performed on -- you tell us
22 on the 14th of July, I want to go back and ask you about
23 what you said about taking the body down to Phoenix. You
24 carried the body in your pickup truck?

25 A. Yes, sir.

1 Q. How did you secure it?

2 A. The body was in a -- we returned the body to its
3 vinyl bag, and the vinyl bag was secured in the bed.

4 Q. How was it secured?

5 A. It was tied down.

6 Q. Tied down with what?

7 A. I had a little bungee strap. The vinyl bags
8 have -- have handles and I have hooks in the beds of my
9 truck. Just put the bungee strap to -- to the corner so it
10 doesn't go anywhere.

11 Q. And so you carried the body down -- down in the
12 back of your pickup truck. And what time of day did you say
13 you did it?

14 A. It's evening. We would have to check to see the
15 actual admission log in the Maricopa Center. It should say
16 the exact time of arrival.

17 Q. Sometime in -- in the evening in the first half of
18 July of 2008?

19 A. Yes, sir.

20 Q. You still live in Phoenix?

21 A. I have houses both here and in Phoenix, yes, sir.

22 Q. You've lived in Phoenix in Julys for a long, long
23 time?

24 A. Yes, sir.

25 Q. Did you say something about waiting until it was

1 cool?

2 A. Yes, sir.

3 Q. I've been waiting for it to be cool for -- for
4 about 40 years. At that time of night in July, unless it's
5 raining, we can expect temperatures deep into the evening in
6 excess of a hundred degrees, can we not?

7 A. You can, yes, sir.

8 Q. Is there some protocol of Yavapai County that --
9 that addresses that transporting of -- of bodies after an
10 autopsy?

11 A. There is. The routine -- the routine protocol.
12 The bodies are -- are released -- we don't have a protocol
13 for in-process cases, but we have a protocol for when we are
14 finished with a case, the transportation was notification of
15 a funeral home. They made their own removal or they in turn
16 hired APT. APT does removals for them.

17 Q. And APT is a -- is a contractor; right?

18 A. Correct.

19 Q. That -- that specializes in the transportation of
20 evidence, including bodies?

21 A. Primarily just dead bodies.

22 Q. Is there some reason why you did not use APT to get
23 the body down to Phoenix?

24 A. There probably was, but I don't remember. I don't
25 remember the exact timing of this. And I was going there

1 anyway. It just -- it just was convenient.

2 Q. And you say that you took it to the Forensic
3 Science Center?

4 A. Yes, sir.

5 Q. By the way, the Forensic Science Center has a big
6 sign out front that says Forensic Science Center?

7 A. That was our choice.

8 Q. Yeah. One might think that it's much like the
9 other Science Center which is just down the street from it,
10 but it's -- it is -- the other Science Center, which I'm sure
11 you know of, is a public institution open to and available to
12 the public for educational purposes.

13 A. This one is not.

14 Q. This one is not. It's just down the street, but it
15 has a sign that says Forensic Science Center, and you have to
16 get very close to the front door to know that it's actually
17 the Office of the Medical Examiner?

18 A. Yes, sir.

19 Q. And it's not open to the public?

20 A. No.

21 Q. Indeed, it's not open even to well-dressed defense
22 lawyers?

23 A. There is an area. There's a lobby and there's some
24 public areas for it, but you do not go into the rooms of the
25 building unaccompanied.

1 Q. All right. But in any event, your -- your trip
2 down there proved unsuccessful at that time?

3 A. Well, the trip down there was successful.

4 Q. It may have been successful because you got home.

5 A. Well, the body was delivered successfully. The --
6 the intended consequences to follow up didn't happen in the
7 way that we thought it would.

8 Q. Right. And so then -- then APT returned the body?

9 A. Yes.

10 Q. And it was put back into your locker at the Yavapai
11 County Medical Examiner's Office?

12 A. Yes, sir.

13 Q. Okay. And now let's return to -- to the
14 experiment. Shall we call it an experiment, or is there a
15 different name that you would like to use for it?

16 A. I think we know what we're talking about. We're
17 talking about the occasion of July 13th in which we are
18 comparing the injured patterns to a possible weapon.

19 Q. To a single possible weapon?

20 A. Yes, sir.

21 Q. No other weapon was -- was secured and brought to
22 the Medical Examiner's Office that day?

23 A. That is correct.

24 Q. The only implement was a Callaway Big Bertha
25 Number 7?

1 A. Yes, sir.

2 Q. Okay. And so the first thing you did after the
3 body was brought out was you reflected the scalp?

4 A. First thing I did is I look at it in terms of
5 manipulation of the body. The first thing I did was to
6 reflect the scalp. I did inspect it to make sure it was as
7 it was when I had taken it down and testified to that last
8 week if things were essentially the same, but now I do
9 reflect the scalp to get a more clear visualization of all
10 the bones of the skull.

11 Q. You described that last time as -- I know it's not
12 comfortable for us to talk about any of these things, but you
13 essentially peeled down the skin?

14 A. Yes, sir.

15 Q. And that's what you already had done on the 3rd of
16 July?

17 A. Yes, sir.

18 Q. And you then essentially put it back?

19 A. Yes, sir.

20 Q. And then you peeled it down again on the 14th of
21 July?

22 A. Yes, sir.

23 Q. Okay. And then you begin a process that -- that
24 you described to us last week as trying to reapproximate the
25 skull in the way in which it -- it was when you first saw it?

1 A. Well, actually, no. I'm actually reapproximating
2 the fractured fragments of bone putting them back where they
3 were pre-injury.

4 Q. Right. Putting them back and carefully putting
5 them back so that to the extent that you could, you would
6 be -- be approximating, your word, approximating as closely
7 as you could where those fractures were --

8 A. Yes, sir.

9 Q. -- at the time you saw them and -- and where they
10 fit if you will on the skull of the victim?

11 A. Yes, sir.

12 Q. You knew that -- that this experiment was at best
13 not one that would be perfect? You couldn't guarantee
14 that -- that you would be able to put things together with
15 absolute perfection?

16 A. The only way you can do that is to go ahead and
17 boil the skull down.

18 Q. Right.

19 A. And I was not preparing to boil the skull down.
20 So it was -- it was -- as I characterized it, it was an
21 approximation and it wasn't definitive.

22 Q. Right. But it was -- it was one that you did with
23 care?

24 A. I did.

25 Q. And you did it with care -- you may have had other

1 reasons of your own, but you did it with particular care here
2 because you wanted to be able to compare the golf club, kind
3 of an example golf club, with what you describe as the
4 fracture margins?

5 A. Yes, sir.

6 Q. The -- the areas of fracturing that might be
7 similar to, might match up with the head of that golf club?

8 A. Or be different.

9 Q. Or be different. And, specifically, you wanted the
10 investigators to be able to see the edges, again your word,
11 the edges of the fractures that might match up or might not?

12 A. Yes, sir.

13 Q. And so when you placed the pieces of skull back
14 where -- where they belonged, you then invited the
15 investigators, one of them, to place the golf club right
16 there at the location where a particular fracture was
17 located?

18 A. And actually it's in plural. One and then more
19 than that. We demonstrated that when I testified.

20 Q. You actually demonstrated one on each side?

21 A. Yes, sir.

22 Q. You demonstrated last week one on the -- on the
23 left side and another on the right side?

24 A. Correct.

25 Q. And you found and told the jury and the Court

1 that -- that you found the golf club and the fracture to be
2 similar?

3 A. Yes, sir.

4 Q. Okay. You started last time with the left side of
5 the skull when you were showing the jury the golf club
6 photographs in comparison with the skull?

7 A. That may have been the sequence that we took. I
8 don't remember that's exactly where we start the time I did
9 the reconstruction. I believe that's the sequence in which
10 we presented them.

11 Q. Okay. Bear with me for just a moment, please.

12 (Brief pause.)

13 BY MR. HAMMOND:

14 Q. Doctor, the first two that you had the jury look at
15 were admitted into evidence as Exhibits 2938 and 2939. Does
16 that exhibit look familiar to you?

17 A. Yes, sir.

18 Q. Do you have the laser pointer here? Thank you.

19 And in your testimony, what you did when you
20 had this exhibit up here, not all of us in the courtroom
21 could see it, but the jury could and you could and the State
22 could and I could because I was sitting where Mr. Sears is
23 now, you -- you defined the area of the fracture, that the
24 end of the fracture that -- that you thought was of
25 importance. Do you remember that?

1 A. Yes, sir.

2 Q. And you defined this arc right there that I now am
3 defining with the laser pointer?

4 A. Yes, sir.

5 Q. Precisely; right?

6 A. Precisely.

7 Q. And you then showed us again with the laser pointer
8 the toe of the golf club, and you showed us how similar the
9 toe of the golf club was to the fracture?

10 A. Yes, sir.

11 Q. Correct?

12 A. Yes, sir.

13 Q. And then to make sure that the jury understood, you
14 then put -- let's see -- another picture up which was marked
15 as 2939. Do you remember this one?

16 A. Yes, sir.

17 Q. And you did the same thing. You showed us the arc
18 of the fracture and you showed us the toe of the club from a
19 little bit different angle and remember you pointed out to us
20 that -- that the club face was not actually in focus very
21 well?

22 A. Yes, sir.

23 Q. But you explained to all of us that this fracture,
24 which we've now seen in these two -- two exhibits, was one
25 that occurred on the left side of the head of the victim?

1 A. That's correct, yes, sir.

2 Q. In your review of materials and looking at the
3 things that we talked about that might have been mistakes,
4 have you gone back to revisit these two exhibits?

5 A. No, I've not gone back to revisit these exhibits.

6 Q. The front of the victim's head is where?

7 A. In this one, I don't know if you can tell. If
8 that's, in fact, is the left, the front of the head should be
9 up at the top.

10 Q. It's at the top, is it not?

11 A. Yes, sir.

12 Q. I want you to hold that thought there just to give
13 you some added perspective. Having defined that particular
14 fracture for the jury on the left side, you then moved over
15 to the right side; correct?

16 A. I think so.

17 Q. And you showed them an exhibit that was marked as
18 Exhibit 2934; correct?

19 A. I don't know the numbers, but I assume that's
20 correct.

21 Q. You'll take my word for the number --

22 A. Yes, sir.

23 Q. -- I'm sure.

24 And in this one, you're now showing the club
25 face actually over on the right side of the head?

1 A. It's almost on top. It's almost on top than the
2 right, but, yes, it's to the right of the midline.

3 Q. And maybe you can call it the upper right, but on
4 the right side of the head?

5 A. Okay.

6 Q. And that's what you wanted the jury to understand,
7 that -- that there were similar fractures on both sides of
8 the head?

9 A. Yes, sir.

10 Q. And indeed in this photograph, we can see this
11 triangular piece that I'm outlining slowly with the laser
12 pointer; correct?

13 A. Yes, sir.

14 Q. That piece is the same piece that appears in the
15 other two photographs. This right here, Doctor, do you see
16 that --

17 A. I see that.

18 Q. -- arc?

19 A. I see that.

20 Q. Tell us that arc is exactly the same arc in the
21 same location as the -- as the last two exhibits. And if you
22 doubt it, I'll go back to them.

23 A. It probably is. What we have in these exhibits is
24 we have cropped them so we don't have a whole lot of
25 landmarks for them, so I'm not even sure whether we're left

1 or right on these. It does appear to be the same arc that we
2 just saw on the previous photo.

3 Q. Well, and even though it's cropped a little bit,
4 you know that this is the front of the victim's head?

5 A. Is the front to the left, or is the front behind --
6 is through the screen?

7 Q. The front of the victim's head in this photograph
8 is to the left.

9 A. Okay.

10 Q. Is it not?

11 A. Well, I don't know because the -- the focus is upon
12 the fractures, and we've blocked out all the landmarks. So I
13 have a set of my own photos that can help me get a little
14 more orientation for them, but without those, you can't tell
15 left from right on these and you can't tell front from back.

16 MR. HAMMOND: Might I, your Honor, inspect
17 Dr. Keen's photographs just for a moment to see if I might
18 help him confirm the orientation of the head if he has any
19 doubt about that?

20 THE COURT: You may look at the photos.

21 (Brief pause.)

22 BY MR. HAMMOND:

23 Q. I'm not going to ask you questions about documents
24 that the jurors can't see, but let me ask you to take a
25 moment and you can look at your own photographs and then --

1 and then confirm for us that even though this photograph has
2 been cropped, you know that the front of the victim's head is
3 here to the left and the back is to the right.

4 A. The front of the head is actually -- it's upper
5 left.

6 Q. It's more -- it's more rotated a little bit in
7 this -- in this direction?

8 A. I think so, yes, sir.

9 Q. But this triangular piece is still at the back
10 behind the -- what you called the midline, the suture line
11 here?

12 A. Again, I -- I would prefer to have an overall to
13 see exactly where we are.

14 Q. Well, these are the exhibits that you used last
15 time. Maybe -- maybe what -- maybe what we ought to do --

16 MR. SEARS: Excuse me, your Honor. Thank you.

17 MR. HAMMOND: Your Honor, might I show the
18 witness the uncropped copies of 20 -- 2938 and 2939?

19 THE COURT: Mr. Butner, you may certainly come
20 forward and view these as well.

21 MR. BUTNER: Thanks.

22 (Brief pause.)

23 BY MR. HAMMOND:

24 Q. Now that we've had an opportunity to look at the
25 uncropped photographs, I'm going to put 2939 back up here so

1 you can see it clearly. Can you see it from -- can you see
2 it clearly from there?

3 A. Yes.

4 Q. Now that you've looked at the uncropped
5 photographs, will you please confirm for us that -- that this
6 is the front of the victim and that this is the back of her
7 head?

8 A. Yes.

9 Q. And that where I'm now pointing the laser is the
10 right side?

11 A. Correct.

12 Q. And that the club head is -- is coming down on
13 the -- as you said before on the right side, but in an area
14 toward the top?

15 A. Actually, this is left.

16 Q. Left. Excuse me. On the left side. Thank you.

17 A. See left and right is sometimes difficult to --

18 Q. Let me do it again. We're going to do it until we
19 get it right. On the left side -- and anytime I get the
20 right and left wrong, you correct me because I'll be doing
21 the same thing to you.

22 A. If I catch it, yes.

23 Q. Fair enough.

24 So this is the left side?

25 A. Correct.

1 Q. And the golf club and the demonstration that you
2 did for us compares that club face with that -- that
3 fracture?

4 A. Now, if we want to be really precise, I'm not a
5 golfer, but the face of the club is actually what strikes the
6 ball and I'm more generic in my description of this. This is
7 the head of the club, not the face of the club, and the
8 corner of the edge of the head is what is conforming to the
9 contour to the fracture.

10 Q. Good point. This is -- what you're comparing here
11 is really as I tried to say earlier the toe of the club?

12 A. I never use the word toe, so I don't --

13 Q. You're not -- because you're not a golfer. Well,
14 that may be one thing you and I have in common. We also both
15 have pickup trucks.

16 But this -- this is the end of the club so the
17 record is clear?

18 A. Yes, sir.

19 Q. Right? And it's that end of the club in this
20 photograph that you're comparing --

21 A. Yes, sir.

22 Q. -- against that -- that injury?

23 A. Yes, sir.

24 Q. Okay. I think you may have already answered this
25 question, but at some point, did you go back and compare your

1 photographs against the photographs taken by Dr. Fulginiti?

2 A. I have actually seen those at one point in time. I
3 don't have them. I don't have a copy of them, and I don't
4 have them for subsequent review, but I have been exposed to
5 them and I have seen them once, yes.

6 Q. We have marked for identification four of them.
7 They're marked Exhibits Number 2962, 2963, 2964, and 2965.
8 Let me ask you to look at these four exhibits. First of all,
9 you know them to be photographs of the work that
10 Dr. Fulginiti did after -- some weeks after the
11 reconstruction that you performed?

12 A. Yes. And in at least one of these we have an
13 identifying number which matches it case to case in case
14 there was some other unusual case. So I would -- I would
15 avow that these are in fact the reconstructed skull as
16 performed by Dr. -- Dr. Fulginiti at Phoenix.

17 Q. Okay.

18 (Brief pause.)

19 MR. HAMMOND: Your Honor --

20 MR. BUTNER: No objection that those be
21 admitted into evidence at this time, Judge.

22 THE COURT: Okay.

23 MR. BUTNER: And in that same vein, the
24 previous Exhibit 2955 that was admitted, the fingernail
25 clippings, I would move at this time for the admission of

1 that exhibit that was previously marked by the defense
2 Exhibit 1034 which on the interest -- in the interest of
3 completeness, because this has basically the evidence packets
4 and so forth that go with those fingernail clippings.

5 MR. HAMMOND: I would certainly stipulate to
6 that.

7 THE COURT: That's -- I'm sorry. Go ahead.

8 MR. HAMMOND: I was just going to say it is
9 Exhibit 1034, and we had taken one photograph out of there
10 for illustrative purposes, but we are happy to have the whole
11 set.

12 THE COURT: So 1034?

13 MR. BUTNER: Correct.

14 THE COURT: That's admitted --

15 MR. BUTNER: Thank you.

16 THE COURT: -- by stipulation.

17 And Exhibits 2962, 63, 64, and 65 are also
18 admitted.

19 MR. HAMMOND: Okay.

20 BY MR. HAMMOND:

21 Q. Doctor, we're going to look at all four of these.
22 And let's start -- this is 2964. You know from -- from the
23 prior examination of this skull that this is the front of the
24 skull --

25 A. I would agree.

1 Q. -- that I'm showing you in the arc here --

2 A. Yes.

3 Q. -- at the top of the photograph?

4 The triangular piece of skull that we have
5 looked at in the other photographs, which you had on the left
6 side is not on the left side, is it, sir?

7 A. Which triangular piece?

8 Q. This triangular piece. This piece right here.

9 A. That piece is on the right. The triangular piece
10 to the left is the triangular piece that's on the left.

11 Q. The triangular piece on the left you believe is the
12 piece that you saw before? We'll look at some others. But
13 do you see this piece that I've -- that I've defined here
14 with the laser pointer --

15 A. I see that piece.

16 Q. -- on the -- on the -- on the right side of the
17 skull?

18 A. Yes, sir.

19 Q. And the bottom of it -- and I'm going to bring this
20 photograph over so that you can see it clearly. The arc is
21 right there?

22 A. There is an arc over there, yes.

23 Q. It is the arc, isn't it, Doctor? This is the same
24 precise arc that you had in your experiment on the left side
25 of the head?

1 A. I'm not sure.

2 Q. Okay. Let's take it slowly. First of all, I want
3 you to look at this so that you can see it a little more
4 clearly than we can on the ELMO. If you look at it here, can
5 you see now clearly the arc that you defined?

6 A. I see an arc, and this is -- this is of the right
7 side injury.

8 Q. That's right. It's the arc of the right side
9 injury. But it is the same arc and the same triangular piece
10 of skull that back on the 14th of July you put on the other
11 side of the head?

12 A. I don't think so, but --

13 Q. Well, let's keep going.

14 A. Let's keep going.

15 Q. Here is 2963, which gives you actually a kind of a
16 clearer view of the left side of the skull.

17 A. Okay.

18 Q. Where is your triangular piece with the
19 clearly-defined arc?

20 A. I don't see it in this one.

21 Q. It's not there. You don't see it because it's not
22 there.

23 A. Okay.

24 Q. Let's look at another one. This is Exhibit 2962.
25 Let's turn it around. There. Because of the way that

1 Dr. Fulginiti does these things, you can clearly tell when
2 you see the side of the skull from a -- from a -- what is
3 essentially a 90-degree angle, you can tell now very clearly
4 what is the front and what is the back?

5 A. I can.

6 Q. Okay. Tell us where the front is.

7 A. This is the front. This is the back. There's the
8 mastoid process. And this is the left side of the skull with
9 curving fracture lines here and here.

10 Q. Right. This is the left side of the skull, the
11 same side of the skull that you told the jury is the side of
12 the skull where that triangular piece is located. We're now
13 looking at 2938. This triangular piece which you told us was
14 on the left side, upper left side, but on the left side of
15 the photograph?

16 A. Well, most of the piece is to the right, but the
17 fracture's on the left.

18 Q. And the fracture on the left cannot be seen in
19 Exhibit 2962, can it, Doctor?

20 A. Unless it's the one at the very top.

21 Q. Unless it's the one at the very top. Well, let's
22 look at 2965. And, again, if you have any difficulty,
23 I'll -- I'll bring the photograph over to you, but you know
24 now that we have a complete reconstruction that this is the
25 right side of the skull?

1 A. It is the right side of the skull.

2 Q. And this where I'm pointing with the laser is the
3 front of the skull?

4 A. It is the front of the skull.

5 Q. And this is the back?

6 A. That is the back.

7 Q. And this right there is your arc, is it not, sir?

8 A. On that one piece, yes, it is. There are two
9 others.

10 Q. The arc that -- that you've talked about -- let's
11 don't have any question about this. The arc that you talked
12 about 10 days ago is this arc right there?

13 A. That arc right there.

14 Q. On 2938. That arc, in fact, when the
15 reconstruction is done is no longer on the left side. It's
16 on the right side. It's right there.

17 A. If that is the same arc.

18 Q. Well, there may be one other way to quench any
19 doubt that you have.

20 MR. HAMMOND: Your Honor, I have two
21 photographs here that have been marked for identification as
22 2956 and 2957. They are exhibits that were introduced at the
23 hearing in October as Exhibit 16. One is slightly more
24 cropped than the other, but I would -- I would like to show
25 them to the witness to see whether they might help with his

1 recollection.

2 THE COURT: Okay. Mr. Butner, have you seen
3 these?

4 MR. BUTNER: I have not. I'm sure I saw them
5 at the Chronis hearing.

6 THE COURT: I mean, I don't know what's being
7 referred to. But, Mr. Butner, you may examine those.

8 MR. BUTNER: May I?

9 THE COURT: Yes.

10 MR. HAMMOND: Your Honor, we probably need to
11 speak to you at side bar.

12 MR. BUTNER: Yeah.

13 THE COURT: Okay. Again, ladies and
14 gentlemen, please feel free to stand while the attorneys
15 appear at side bar.

16 (Discussion off the record.)

17 THE COURT: Thank you. Okay. We'll go back
18 on the record then.

19 Mr. Hammond.

20 MR. HAMMOND: Your Honor, I move for the
21 limited purpose that we've discussed with the admission of
22 Exhibits 2956 and 2957.

23 MR. BUTNER: No objection.

24 THE COURT: Okay. Then 2956 and 57 admitted
25 as indicated.

1 BY MR. HAMMOND:

2 Q. Let me place these in front of you, Dr. Keen, and
3 we -- we have at this point elected not to display them
4 because of their very graphic nature as I think you can
5 understand.

6 But first of all, let me ask you if these are
7 your hands in these photographs?

8 A. Yes. And this is the time of the original autopsy
9 I think.

10 Q. This is the time of the autopsy on the 3rd of
11 July --

12 A. Correct.

13 Q. -- of 2008?

14 A. Yes, sir.

15 Q. And during this phase of the autopsy, you are --
16 you are looking down at the skull of the victim?

17 A. Correct.

18 Q. You have -- as you told us now a couple of times,
19 you have reflected the scalp so that you can see the skull?

20 A. Yes, sir.

21 Q. And one thing you can see is that at least the
22 portion of the skull that you have your right thumb and index
23 finger on is still adhered to the rest of the skull, is it
24 not?

25 A. It appears that, yeah, the -- the galea is still

1 there, the connective tissue that comes across the outer
2 surface of it is still there.

3 Q. So there is still a tissue connection at this point
4 and that tissue connection tells you and tells us that the --
5 the fragment of skull, which is a triangular piece of skull,
6 is still in place?

7 A. This piece, I don't characterize it as triangular.
8 But, yes, this piece of bone is still in place, and it's
9 contiguous with the fracture on the piece of bone.

10 Q. And -- and you are looking down at the -- at the
11 top and right side?

12 A. It's a view from this perspective coming from above
13 and behind and the right.

14 Q. Above, behind, and the right. And you can tell
15 that because among other things, you can see the victim's
16 ear?

17 A. Correct.

18 Q. And in one of the photographs, you can see a
19 portion of her shoulders?

20 A. Correct.

21 Q. Okay. That piece, Doctor, is this piece right
22 here, is it not?

23 A. That is, yes. That's the piece I'm holding.

24 Q. This is exactly the piece you are holding and it
25 is -- as Dr. Fulginiti reconstructed, it is in exactly the

1 same location that you've just indicated. It's to the right
2 and above her head?

3 A. Yes. Yes.

4 Q. Doctor, when you did the reconstruction that you
5 told the jury about last week, that same piece of skull,
6 exact same piece of skull, you positioned on the left side?

7 A. It's turned upside down.

8 Q. You rotated it 180 degrees; correct?

9 A. That's what it looks like in that photo, yes, sir.

10 Q. And then you -- you had someone lay a golf club
11 next to it so that you could demonstrate how it was -- how it
12 was similar and how it was in your view more than just
13 possible that this fracture occurred because someone took a
14 golf club and hit this person on the left side of the head?

15 A. It isn't the left.

16 Q. It is the -- it is to the left side of the midline
17 without any question. It's exactly where it was 10 days ago,
18 is it not?

19 A. Okay. That -- the accuracy of this is -- that does
20 not depict the left side of the head injury. That bone as
21 you say is inverted. If I may see the -- I'll show you where
22 it is. This bone and this curvature is this bone and this
23 curvature and this curvature is contiguous with this
24 curvature and the point of demonstration of curvature of club
25 to the curvature here is similar curvature.

1 Q. Not exactly.

2 A. But it's not to the right.

3 Q. No. It's --

4 A. It's to the left.

5 Q. Well, and not only do you have that problem that
6 what you told the jury was on the left is actually on the
7 right, but when you did your -- your testimony, you showed
8 them pictures of the right side. Do you remember that?

9 A. Yes, we've seen pictures of the right side with
10 the -- with this other portion of that same fracture.

11 Q. And when you looked at the pictures of the right
12 side, you concluded that the -- that the golf club or a
13 portion of the golf club hit the right side -- could have hit
14 the right side of the head, did you not?

15 A. Yes, sir.

16 Q. And in doing that, you used a different face of the
17 club, a different part of the head of the club; correct?

18 A. Yes, sir.

19 Q. Give me just a moment.

20 (Brief pause.)

21 BY MR. HAMMOND:

22 Q. This is 2935 that was admitted into evidence.
23 Let's do it this way. Do you remember this one?

24 A. Yes, sir.

25 Q. And -- and in this one, you laid the club face in

1 your testimony down so that -- you remember this little V in
2 the club, this little V on the -- on the top of the club
3 head?

4 A. Yes, sir.

5 Q. You said that that was the likely focus point or
6 point of force that -- that you said could have caused these
7 injuries?

8 A. Yes, sir.

9 Q. And then when you took the club head away and
10 showed the jury Exhibit 2936, this is what you showed them;
11 correct?

12 A. I think that's correct.

13 Q. You showed them this curvilinear fracture; correct?

14 A. Yes, sir.

15 Q. That does not have in it the remainder of that arc
16 at all?

17 A. That's correct. And these pieces are not -- not
18 any longer attached. These other pieces are all just free
19 pieces of bone in here.

20 Q. They're free pieces of bone, but they're bone that
21 you put there as part of your reconstruction to -- to tell
22 this jury what the skull looked like at the time of this
23 examination that you did on the 14th of July; correct?

24 A. Yes, sir.

25 MR. HAMMOND: Your Honor, I think this would

1 be a good time for us to break.

2 THE COURT: Thank you. Ladies and gentlemen,
3 we'll take the noon recess. Please remember the admonition.
4 And I'd ask that you be reassembled at 1:15, and we'll start
5 as soon as we can after that.

6 I ask the parties to remain.

7 Dr. Keen, you're excused and you're in recess
8 as well.

9 THE WITNESS: Thank you.

10 (Brief pause.)

11 THE COURT: Thank you. Please be seated.

12 The record will show that the jury has left
13 and Dr. Keen has been excused.

14 I just wanted to make a record regarding the
15 side bar. The attorneys and Mr. DeMocker are present.

16 So we had the two side bars. The first one
17 had to do with the photographs of the fingernail clippings.
18 And, Mr. Butner, you withdrew that objection; right? I don't
19 see that we need any further record based on the avowals and
20 further foundation, you withdrew your objection.

21 MR. BUTNER: I did, Judge. And just to
22 further clarify that then there was a stipulated admission of
23 Exhibit 1034 which contained those same photographs plus all
24 of the photographs that were taken in conjunction with those
25 two that were admitted as 2955 I believe.

1 THE COURT: Thank you.

2 And, Mr. Hammond, anything on the first side
3 bar?

4 MR. HAMMOND: No. No, your Honor.

5 THE COURT: Okay. The second side bar is more
6 involved and it concerned Exhibits 2956 and 57 and admitting
7 them today and whatever record you care to make on that.

8 Mr. Hammond, you were urging their admission.

9 MR. HAMMOND: Yes. Your Honor, so that the
10 record is -- is clear, the -- the exhibits that -- that we
11 introduced were admitted at the Chronis hearing as
12 Exhibit 16. They were part of Dr. Fulginiti's summary of --
13 of what he did in his autopsy.

14 The photographs were among a set of
15 photographs that were considered by this court, by Judge
16 Lindberg, on the 15th of January when we had what we called
17 throughout these proceedings as the gruesomeness hearing.
18 And at that hearing, Judge Lindberg observed that -- that
19 2995, which is the image number for Exhibit 16, was as I
20 think we can all see particularly gruesome. It's page 62 of
21 the January 15 transcript.

22 He then went on to say that -- that he would
23 find it presumptively gruesome, now actually uses the word
24 prima facie gruesome, and then he goes on to say -- this is
25 at line 10 of page 63: "I could find" -- well, 2995 and

1 2997: "I could find gruesome and would not admit them until
2 there's some probative value that outweighs the prejudicial
3 effect. And I think that I need testimony with regard to
4 that so I will find prima facie that they are gruesome." And
5 at that point they were essentially taken off the table and
6 not used until this morning.

7 I ask that they be admitted for the purpose of
8 displaying them to Dr. Keen to assist in removing doubt about
9 the location of the fragment that he had mislocated at the
10 time of his reconstruction.

11 We would prefer that -- that out of
12 sensitivity for the jury that the exhibits themselves not be
13 displayed. And I think that in light of the Court's ruling,
14 I was able to ask sufficient foundational questions to obtain
15 the witness' agreement that this was indeed a piece of the
16 skull that he had mislocated.

17 THE COURT: Thank you.

18 Mr. Butner, any further record on that?

19 MR. BUTNER: Judge, yeah. For the record, I
20 don't have an objection to the admissibility of those
21 photographs. I indicated that at side bar.

22 But I would like to be able, if necessary, to
23 show those photographs to the jury if Dr. Keen needs to use
24 those photographs to clarify and explain his answers. And I
25 think they shouldn't be admitted for some limited purpose,

1 but rather we should be able to use them if necessary. I
2 realize that they were presumptively gruesome. But we've now
3 passed the point of where there is probative value and, quite
4 frankly, counsel has met the burden in that regard that it
5 outweighs the prejudicial effect of those photographs, so if
6 necessary to explain the Doctor's testimony, then I do
7 believe that they should be shown to the jury. That's not
8 what I'm planning on doing at this point in time, but it may
9 be necessary.

10 THE COURT: Mr. Hammond, what if that
11 situation arises that Dr. Keen believes he really needs to
12 demonstrate something off of those photographs?

13 MR. HAMMOND: Judge, I -- I hope and believe
14 that we won't get there, but if we did, I would like at that
15 point to be given a moment of advance notice. Possibly we
16 could -- if that were to happen, we could have another side
17 bar and if the Court concludes that the -- that the need to
18 display these to the jury outweighs our concerns, then we
19 would abide by the Court's instruction. But I think the --
20 the approach to this on a stepwise -- step-by-step basis is
21 the appropriate way to go.

22 THE COURT: I think so too.

23 Mr. Butner.

24 MR. BUTNER: Judge, I disagree. If they're
25 admitted into evidence, I think that they need to be useable

1 for whatever purpose is necessary now. They're either in or
2 they're not in. And I've agreed that they can be admitted,
3 and I think that we need to be able to use them if necessary
4 for the Doctor to explain his testimony.

5 THE COURT: Okay. Well, I was agreeing with
6 the step-by-step approach, but you're saying they're admitted
7 now.

8 MR. BUTNER: I am.

9 THE COURT: And what I think Mr. Hammond was
10 just suggesting in the event that they are now going to be
11 displayed and you're indicating you want to avoid that if you
12 can --

13 MR. BUTNER: I do.

14 THE COURT: -- that he would like to have a
15 minute to -- for me to consider actually the 403 balancing
16 type of thing that goes into that. You're saying it's
17 essentially done. I'm saying I would be -- I would like to
18 take a side bar, but I understand the position of both sides.
19 But I would like to take a side bar before they would be
20 fully displayed to the jury on the ELMO and passed around.

21 Thank you.

22 MR. HAMMOND: Your Honor, my colleagues tell
23 me that -- I'm very sorry about this, but just so the record
24 is clear, I think I may have said that these were Exhibits
25 2995 and 2997. They were images. The exhibit was

1 Exhibit 16. And the exhibit now is the exhibit that we gave
2 to the -- to the -- or the exhibits we gave to the witness,
3 which are --

4 THE COURT: Let's double-check that.

5 MR. HAMMOND: Yeah. 2956 and 2957. So that
6 when I said 2995 and 2997, those are image numbers.

7 THE COURT: Correct. Thank you.

8 We will take the noon recess.

9 (Recess from 12:04 p.m. to 1:19 p.m.)

10 THE COURT: Please be seated. Thank you.

11 The record will show the presence of the
12 defendant, the attorneys for both parties, and the jury.

13 Dr. Keen is on the witness stand.

14 Mr. Hammond, when you're ready.

15 MR. HAMMOND: Thank you, your Honor.

16 BY MR. HAMMOND:

17 Q. Dr. Keen, let's see if we can summarize a little
18 bit what -- what we learned this morning. Let me put back up
19 first Exhibit 2962 that you identified was one of the --
20 let's see if I can get it close. There. 2962 was one that
21 you identified as one of Dr. Fulginiti's reconstruction
22 photographs?

23 A. From the left side of the skull, yes, sir.

24 Q. From the left side. And we -- this gives us
25 actually a pretty good view of the entire left side looking

1 again at -- if you were looking straight on at it.

2 A. Except for what's missing, yes.

3 Q. Except for the -- there are a couple -- when you
4 say what's missing, you're talking about the little piece
5 right there?

6 A. Yes, sir.

7 Q. But you will agree with me that the -- that the --
8 what you've described as the curvilinear evidence from the
9 skull is not on this side of the skull?

10 A. Not on this side of the skull.

11 Q. And if you had testified before that there were
12 curvilinear fractures on both sides, you would now
13 acknowledge that that was incorrect?

14 A. I would.

15 Q. Thank you.

16 And then looking down, this is 2963. Give me
17 just a moment to get it -- this is the thing with the -- the
18 photograph that we looked at before lunch, which is a little
19 higher aspect. It's really more toward the top, but maybe
20 only slightly to the left side?

21 A. Right.

22 Q. Correct?

23 A. Or left?

24 Q. This is the -- this is the left side that I'm --
25 that I'm defining here with the laser pointer?

1 A. We're looking more on top of it, yes. Okay.

2 Q. Right, it is more on top. You're certainly right
3 about that. It's a little bit like looking at it from this
4 angle here.

5 A. Yes.

6 Q. And you now agree with me that looking at this
7 aspect of the skull of the victim, there are no curvilinear
8 fractures evident here?

9 A. No sharp curvilinear fractures. There's some
10 curved fractures, but no sharp curvilinear fracture.

11 Q. None that would conform as you said when you were
12 here before to the head of a golf club?

13 A. Actually, in that photo, if you want to put it back
14 for just one moment, you can see the curve.

15 Q. You can see it on the other side of the skull?

16 A. You can see -- it's basically up on top.

17 Q. Let's put it back up because that's exactly where I
18 was going to go. You're talking about right there?

19 A. Yes, sir.

20 Q. Correct?

21 A. Yes, sir.

22 Q. That's the -- that's the curved piece of this
23 triangular-shaped portion of the skull that you had
24 incorrectly rotated 180 degrees?

25 A. Yes, sir.

1 Q. You can actually see in this photograph the suture
2 line --

3 A. Correct.

4 Q. -- of the back -- that's -- that's this line right
5 here. And when you completely boil the skull and put it back
6 together, you can -- you can easily see, really undeniably
7 see that that's the line from the triangular piece that fits
8 perfectly the back of the skull?

9 A. Well, we're talking about the same piece, but if I
10 may, it's really not triangular. There's several pieces of
11 bone that look more or less triangular. I would call this
12 piece of bone triangular. I would call this piece of bone,
13 the one we've been calling -- you've been calling triangular,
14 call it more rhomboid. But this -- when we talk just
15 triangular, that's why I'm a little cautious because there's
16 a lot of pieces that are triangular. But the one in question
17 is this piece, and, yes, it was turned 180 degrees in the
18 photo.

19 Q. Okay. Well, how about if we call it the piece with
20 the arc?

21 A. Okay.

22 Q. Then that way, we'll both know. And that's the
23 piece that -- that correctly belongs in the way that you see
24 it now?

25 A. That is the proper anatomic position, yes.

1 Q. And then we also looked then coming around a little
2 bit more so that we can see it -- let's see, if I turn it
3 this way, maybe it'll -- how's that? This is Exhibit 2964.
4 And now Dr. Fulginiti has rotated a little bit farther,
5 hasn't she?

6 A. This view is virtually on the top of the skull with
7 the right side of the skull to the top of the photo.

8 Q. And this is what I have been calling a
9 triangular-shaped piece is now really very clearly visible?

10 A. Yes, sir.

11 Q. You called it something I didn't learn at
12 New Mexico. What's that?

13 A. It's a rhombus.

14 Q. Rhombus?

15 A. It's rhomboid, yes.

16 Q. And that's the arc?

17 A. Yes.

18 Q. That used to be over here?

19 A. Yes.

20 Q. Okay. And then completing at least one set --
21 let's do it this way -- of Dr. Fulginiti's pictures, I want
22 to be able for you to see -- there, that's pretty good.
23 That's -- that's Exhibit 2965. And now we can see you're
24 looking right at the right side of the skull; correct?

25 A. Correct.

1 Q. And now we can see this one curvilinear fracture;
2 correct?

3 A. Yes, sir.

4 Q. And it is composed in part of the arc that was
5 misplaced on the other side of the skull?

6 A. It is.

7 Q. This then becomes the -- the only real curvilinear
8 fracture found on the skull of this victim?

9 A. The only one that has a definitive pattern to it,
10 yes.

11 Q. Let me ask you to look at two more exhibits. These
12 are Exhibits 2968 and 2969. I'd like you to simply identify
13 them as part of the set of photographs prepared by
14 Dr. Fulginiti which you have reviewed. They are?

15 A. They are.

16 MR. HAMMOND: Your Honor, I would --

17 MR. BUTNER: No objection to the admission of
18 2968 and 2969, your Honor.

19 THE COURT: Those two exhibits are admitted.
20 BY MR. HAMMOND:

21 Q. Let's look first at 2969. In that aspect. In this
22 photograph, you can now clearly see again the one and only
23 one curvilinear fracture to the right side of the victim's
24 head?

25 A. Yes, we see that one.

1 Q. Okay. And then you know that Dr. Fulginiti took a
2 measuring ruler, and this is 2968, and she put that the ruler
3 up so that you could clearly see this one curvilinear
4 fracture --

5 A. Correct.

6 Q. -- correct?

7 MR. HAMMOND: Your Honor, might I pause for
8 just a moment and take the screen down?

9 THE COURT: Yes.

10 (Brief pause.)

11 BY MR. HAMMOND:

12 Q. Dr. Keen, you are -- are aware that -- that the
13 fracture that you at one time had placed on the left side of
14 the -- of the skull is -- is actually underneath three
15 lacerations? Do you recall that?

16 A. And there are fractures on the left side, but the
17 curve, yes, is under -- is under three lacerations.

18 Q. And indeed the lacerations that you noted which you
19 have in a diagram that we could look at if we wanted to are
20 all vertical?

21 A. Vertical and somewhat parallel.

22 Q. Vertical and somewhat parallel. The -- the arc of
23 the -- of the skull was not in a vertical orientation?

24 A. It's more horizontal.

25 Q. It was more horizontal.

1 You at one point had said that you would
2 expect that the fractures underlying the lacerations would
3 conform to the lacerations?

4 A. I stand by that.

5 Q. Yeah. But in this case, the -- the fracture that
6 you identified never conformed to those lacerations, did it?

7 A. It doesn't conform to those lacerations. It does
8 conform to the one on the other side.

9 Q. Those lacerations on the -- on the left side
10 don't -- don't conform to anything that you could match up
11 with a golf club, anything that you could say would mimic,
12 match, or be similar to a golf club?

13 A. Consistent with, but not necessarily specific to,
14 no.

15 Q. And, in fact, you -- you would now say that any
16 number of objects could have caused all of that -- that
17 damage and it's certainly severe, but all of that damage to
18 the left side of her head?

19 A. Actually, I would disagree. There are several --
20 several objects to be considered, but I wouldn't say that
21 just anything could do it.

22 Q. Right.

23 A. We could consider individually hypotheticals, but
24 it doesn't --

25 Q. Well, let's talk about some things --

1 A. Okay.

2 Q. -- that -- that -- that have been mentioned by you
3 and by others. Those -- those fractures could have been
4 caused by an axe handle?

5 A. Unlikely.

6 Q. They could have been caused by all kinds of
7 different garden implements?

8 A. Difficult to conceive of which ones it would
9 because the laceration patterns to match just wouldn't match
10 with most of the garden implements that you would use.

11 Q. It's interesting though that -- that for many,
12 many, many months, indeed maybe more than a year, you and
13 Dr. Fulginiti and others went back and forth on -- on what
14 kinds of objects could have caused the damage, all of the
15 damage that we have looked at both in your direct examination
16 and cross; isn't that correct?

17 A. I don't think so. I didn't have that much
18 conversation actually with Dr. Fulginiti.

19 Q. Well, let me remind you of one in particular. Do
20 you recall the day that Dr. Fulginiti came up here?

21 A. Yes, I do.

22 Q. And spent a great deal of time during the day
23 talking to you and to Michael Sechez from the County
24 Attorney's investigative staff and other members of the
25 Sheriff's Department?

1 A. Yes, sir.

2 Q. And in that -- in that day and there is by the way,
3 tell me if I'm wrong, no report written of that meeting?

4 A. I'm not aware of a report.

5 Q. Not a word; right?

6 A. I didn't prepare a report.

7 Q. You didn't write a report. You didn't write any
8 kind of a note or a memo or anything that would tell us what
9 happened, but you do know that that meeting was inconclusive?

10 A. I do.

11 Q. That the purpose of conversation that day or a
12 purpose of it was to see whether you and Dr. Fulginiti might
13 be able to agree on what the possible causes were for the
14 damage done to the -- to the head of this victim? That was
15 why you were meeting with her?

16 A. Is that a question?

17 Q. You tell me if I'm wrong.

18 A. I don't know the purpose. The meeting was to
19 discuss what her findings were and what my findings were.

20 Q. And at the end of the day when you had discussed
21 your findings and hers, you could not come to a conclusion
22 with respect to what had caused the damage to this woman's
23 head?

24 A. I still said that I thought that the golf club was
25 responsible for at least in part, and her conclusion was that

1 it would also be consistent, but there are some injuries in
2 there that we could not specify precisely what instrument
3 caused them.

4 Q. Well, you -- you went beyond that; right, and
5 you -- you said that -- that there were a lot of things that
6 you could not rule out here?

7 A. I think that's possible.

8 Q. Let's take a couple of the simple ones. You
9 couldn't rule out that -- that these injuries were caused
10 by -- by multiple objects?

11 A. Could be more than one object, yes. Could not rule
12 that out.

13 Q. Multiple, we call them objects. You might call
14 them weapons. Could have been -- could have been more than
15 one; could have been several different weapons?

16 A. Possible.

17 Q. More than possible? It's something that -- that
18 you could not rule out as -- as -- as among the things that
19 could have happened here?

20 A. That's true.

21 Q. Similarly, you couldn't rule out -- from what you
22 had seen and looking at the lacerations and looking at the
23 skull fractures, you couldn't rule out multiple attackers?

24 A. Could not do that either.

25 Q. And indeed the -- the idea that this was done with

1 a golf club really in your mind was only one of several
2 explanations?

3 A. It was the primary explanation. I was not able to
4 exclude other possibilities, but having no other specific
5 possibilities brought forward, it was the only conclusion I
6 was arriving at.

7 Q. And now that it has been pointed out to you that
8 there is really only one curvilinear fracture on the skull,
9 you know that if you're going to -- to say that a golf club
10 or the head of a golf club did this, that golf club has to be
11 the cause of that fracture?

12 A. Yes, sir.

13 Q. And you are going to still maintain that that's
14 what you think could have happened here?

15 A. Yes, sir.

16 Q. Okay. You know that -- that Dr. Fulginiti did not
17 come to that conclusion?

18 A. I think that is probably an accurate statement.

19 Q. You also know that one reason why the idea that
20 that fracture, which we looked at, the curvilinear fracture
21 on the right side may not have been caused by a golf club is
22 because curvilinear fractures are not uncommon caused by
23 things that have nothing to do with golf clubs?

24 A. Not in those dimensions. Smaller curvilinear
25 fractures, I will grant you that. Large ones like this, I

1 would not agree.

2 Q. Your opinion is that a curvilinear fracture
3 that's -- that's as long as Dr. Fulginiti's examination shows
4 could not have been caused naturally or could have been
5 caused because of the curvature of the skull?

6 A. No, that's not just a consequence of the curvature
7 of the skull.

8 Q. So you continue to maintain that at least one and
9 maybe only one fracture on the -- on the skull of this victim
10 is the result of -- of something that you think looks like
11 the head of a golf club?

12 A. Yes, sir.

13 Q. And that's -- and that's what you're going to
14 continue to maintain?

15 A. Yes, sir.

16 Q. At various times, you have said that you thought
17 there were as many as three or four fractures that -- that --
18 that were -- were in your judgment mimicking or similar to a
19 golf club.

20 A. Yes, sir.

21 Q. Are we in agreement now that you're down to that
22 one?

23 A. Well, depends on how we define the fractures. I
24 think maybe we can clarify this a little. We can get it down
25 to one precise impact that results in multiple fractures that

1 we see along this curvilineature (sic). That's the one that
2 is most characteristic of a golf club.

3 I have other fractures which lack that kind of
4 curvature and cannot be -- could be caused by, but cannot be
5 specified as and linked necessarily to a golf club and that
6 includes those on the back, those on the left.

7 Q. Well, and there -- there are as for all of those
8 and you know that there will be witnesses who will testify in
9 this trial about all of those, they could have been caused by
10 a very wide variety of other objects?

11 A. Yes, sir.

12 Q. Okay. But one thing that happened on the -- on the
13 14th of July, if that was the date that the investigators
14 came to see you, is that they -- they may well have left that
15 examination, that experiment with the images of the golf club
16 in their -- in their minds thinking that a golf club must
17 have committed, must have been responsible for the commission
18 of this crime? You understand that?

19 A. I understand that.

20 Q. They came there looking for -- for evidence that
21 might -- that might tie this crime to -- to a particular
22 defendant and particularly Steve DeMocker?

23 MR. BUTNER: Is that a question? Objection.

24 THE COURT: Overruled.

25 (Next page, please.)

1 BY MR. HAMMOND:

2 Q. You knew that?

3 A. I was aware of that.

4 Q. You knew that that's why they came, and when they
5 left, you had every reason to believe that the investigators
6 at least thought that they had their man?

7 A. Don't know that.

8 Q. You don't know what they thought?

9 A. No, I don't know what they thought.

10 Q. You wouldn't think that unreasonable that -- that
11 these investigators might well have walked away thinking,
12 well, it had to be a golf club?

13 A. No. I think they -- I think that they very well
14 may have had that impression.

15 Q. Okay. Going all the way back to the first thing
16 you do in an autopsy, you told us that -- that the autopsy is
17 really -- first of all, it's a search for the cause of death?

18 A. Yes, sir.

19 Q. But it's also a search for -- for evidence that
20 that may help identify a perpetrator or perpetrators?

21 A. That too.

22 Q. You -- you I think have -- have -- have said that
23 the lacerations -- insofar as they could be identified, those
24 lacerations could have been caused by a very wide variety of
25 implements?

1 A. Could be a variety of instruments, yes.

2 Q. The thing that caused you to -- to go beyond saying
3 it was a wide variety of implements or weapons was your
4 conclusion about the underlying skull?

5 A. Actually, it's the conjunction of the two. It's
6 the character of the lacerations overlying the fractures and
7 the accompanying fractures beneath those specific
8 lacerations. I didn't ignore one or the other. It's the
9 combination of the two that led me to believe that it was a
10 golf club.

11 Q. Except for we now know that the lacerations on at
12 least half of the skull don't match the underlying fractures
13 at all?

14 A. Did not result in that kind of fracture, no, but it
15 still does not rule them out as the cause of the fracture.

16 Q. It doesn't rule them out, but it doesn't allow for
17 you to say to any degree of scientific certainty that you
18 know what caused any of those lacerations?

19 A. Or fracture.

20 Q. Or fractures; correct?

21 A. Correct.

22 Q. There was one other thing that -- that happened in
23 the -- in the course of your autopsy and then occurred again
24 when the investigators came back on -- on the 14th of July
25 and that has to do with the lacerations -- excuse me -- the

1 contusions on the victim's forearm. Do you remember that?

2 A. Yes, sir.

3 Q. At the time of the autopsy, you -- you looked at
4 those and -- and I think you said when you were here a few
5 days ago, you -- you regarded those as defensive wounds?

6 A. Yes, sir.

7 Q. First of all, do you have an opinion with respect
8 to whether those wounds occurred before or after the victim
9 lost consciousness?

10 A. Yes. For them to be defensive, it would have to be
11 before loss of consciousness.

12 Q. But that's a definitional matter. You -- they
13 are -- if you -- if you decide that these are defensive
14 wounds, then of course by definition they have to be while
15 the victim is defending herself?

16 A. And -- that's true.

17 Q. But -- but from a biological standpoint or a
18 forensic pathologist standpoint, bruising like that could
19 occur after the loss of consciousness?

20 A. Conceivably, yes.

21 Q. And, in fact, isn't it true that -- that your
22 opinion at one time was that you couldn't tell whether
23 those -- those contusions occurred before or after the loss
24 of consciousness?

25 A. That's true. And -- and -- but that defines

1 whether you call them defensive or not.

2 Q. Right. It does. Because if the -- if the victim
3 has lost consciousness, then they really are no longer by
4 definition defensive wounds?

5 A. They're just in the way.

6 Q. And they -- they are -- they are wounds that may or
7 may not tell you very much about what happened in this
8 struggle?

9 A. That's true.

10 Q. And one thing that -- that you observed is that
11 those contusions were virtually parallel?

12 A. Yes.

13 Q. They are -- they are on the same line with each
14 other. And we'll look at them again in a moment. But you
15 remember that you thought and still do to this day that those
16 two contusions line up in an almost perfectly parallel
17 aspect?

18 A. Well, they're very -- actually, we have -- if we're
19 talking parallel, we have four contusions. We have two sets
20 of two. And each -- each of the two are parallel because
21 they're produced by a rod-like instrument. But the two
22 strikes are roughly parallel.

23 Q. And those two strikes, if you just look at those as
24 you did in your autopsy when you put the rod down beside
25 them, could have been caused by -- by as you testified any

1 rod-like instrument?

2 A. Yes, sir.

3 Q. And we could think of lots of different rod-like
4 instruments that might have -- have -- have caused those
5 particular contusions?

6 A. Yes, sir.

7 Q. But there was another thing that caused you to
8 think that -- that it might have been again a golf club --

9 A. There was.

10 Q. -- correct?

11 A. Yes, sir.

12 Q. And this time it was the discoloration above the
13 victim's elbow on her right side?

14 A. Yes, sir.

15 Q. Correct?

16 A. Yes, sir.

17 Q. And you showed us a couple of photographs of
18 that -- that area at the time of the autopsy?

19 A. Yes, sir.

20 Q. And then you came back and showed us that same arm
21 in photographs taken on the 14th of July?

22 A. Yes, sir.

23 Q. And you noticed that there appear to be
24 differences, differences which you thought further confirmed
25 your view that the contusions on the right side might have

1 been caused by a golf club?

2 A. Yes. And the differences between the 3rd and the
3 14th?

4 Q. Yes.

5 A. Yes, there was -- there was some difference in the
6 appearance.

7 Q. And the principal difference was that there was
8 something that you called an indentation --

9 A. Yes, sir.

10 Q. -- correct? And the indentation you said was in
11 this area, you called it the triceps region, but in the area
12 above the elbow?

13 A. Yes, sir.

14 Q. And when you were with the officers, the
15 investigators on the 14th of July, you or one of them laid
16 the golf club down right along one of those contusions and
17 laid the head against the indentation --

18 A. Yes, sir.

19 Q. -- correct?

20 A. Yes, sir.

21 Q. How did that indentation get there?

22 A. Probably by the first strike because it was there
23 when we began our exam on the 14th. And it is a discolored
24 area of the skin which was the bruise that I noticed when I
25 first did the exam.

1 Q. Are you saying that the indentation which you
2 observed and talked about when you were testifying the week
3 before last is -- is an indentation that you saw and observed
4 at the time of the autopsy?

5 A. The indentation is where I saw the bruise, and with
6 the passage of time with refrigeration postmortem, it's
7 become more visible as an indentation. I did not observe it
8 as an indentation. At the time of the autopsy, I observed it
9 as a contusion. At the time of the 14th, it now is more of
10 an indentation matching the contusion.

11 Q. So just so we understand this, by the 14th of
12 July what had initially seemed to you to be some bruising now
13 looked like an indentation?

14 A. And bruise.

15 Q. And some -- and the -- and some bruising that
16 you -- that you say you saw before?

17 A. Yes, sir.

18 Q. And that indentation as we saw in one of the
19 photographs fit nicely with the head of that golf club?

20 A. It was consistent with it, yes, sir.

21 Q. And you showed the investigators that?

22 A. Yes, sir.

23 Q. And your -- your explanation for why the
24 indentation is not visible, and we'll look at it again, but
25 if -- if it turns out that that indentation is not visible as

1 I think you testified before, the -- the cause for the
2 indentation being visible is the storage of the body?

3 A. That probably contributes to it, yes, sir.

4 Q. Probably contributes to it?

5 A. Yes, sir.

6 Q. What else might explain it?

7 A. I don't know of anything else that would.

8 Q. So we now have -- have -- by the 14th of July, we
9 have an indentation on the -- on the arm that -- that fits
10 the head of a golf club at least to some extent?

11 A. Consistent with it, yes.

12 Q. Which was not visible two weeks -- 11 days earlier?

13 A. Indentation not perceived. Contusion perceived.

14 Q. The contusion being the bruising?

15 A. Yes, sir.

16 Q. Which I think as you -- as you have said and,
17 again, if you want to, we'll look at it, is really barely
18 visible?

19 A. It is in the photographic technique that we have
20 here. That's the other thing that could have been done at
21 that point in time if you do -- if you do incident lighting
22 of it where you accentuate the surface, it may have actually
23 been an indentation. I didn't to my naked eye observe it as
24 an indentation.

25 Q. You didn't observe it, you didn't photograph it,

1 and you didn't report it in your autopsy report?

2 A. Correct.

3 Q. Doctor, maybe we ought to take a moment and look at
4 those just so that we -- we have them -- have them all
5 clearly in mind.

6 (Brief pause.)

7 MR. HAMMOND: Your Honor, we seem to have a
8 technological problem here that we've not been able to solve
9 here yet.

10 (Brief pause.)

11 THE BAILIFF: There you go.

12 MR. HAMMOND: Thank you very much.

13 BY MR. HAMMOND:

14 Q. Dr. Keen, let's look first at the photographs you
15 introduced that -- that were done at the autopsy. Here is
16 Exhibit 2922. Can you identify that one?

17 A. That's -- that's a photo taken at the time of
18 autopsy. It's been cropped since then. Shows the right
19 forearm, the right elbow, and clearly the parallel contusion
20 marks coming across the wrist and then the ones coming across
21 the forearm. Then you see some discoloration in the triceps
22 area, but it's in the shadow so you can't get a good contour
23 of it.

24 Q. Here is where you say there -- there is some --
25 some bruising that doesn't appear well in the photograph?

1 A. Yes, sir.

2 Q. But you -- you have testified on direct that you
3 know it was there, you just can't see it?

4 A. Yes, sir.

5 Q. And this is Exhibit 2921. Tell us what you're
6 doing here.

7 A. This is at the same time of the autopsy. Still
8 showing the right forearm and the right elbow and the yellow
9 rod-like structure acrossed the arm mimicking the pattern is
10 a fiberglass arrow.

11 Q. And you can still see that there may be a shadow of
12 some kind on the back of the arm, but you still can't see as
13 you said earlier any clear evidence of bruising?

14 A. It's not the right type of photo to expose that,
15 no.

16 Q. Is there another photo?

17 A. No, I don't think so.

18 Q. So we don't have the benefit of a photograph from
19 the autopsy that -- that would show us this -- this area of
20 bruising?

21 A. I don't think so.

22 Q. And then on the 14th of July, this is the same
23 day that you performed the other experiment; is that correct?

24 A. Yes, sir.

25 Q. This is the same golf club that the investigators

1 brought in?

2 A. It is.

3 Q. And someone has laid it against one of the -- the
4 contusions?

5 A. Yes. The one that matched up with the location of
6 where I thought there was the bruise that was reminiscent of
7 a golf head and since it's lying in the same angle that would
8 be necessary to produce that kind of injury.

9 Q. So you laid it on that particular contusion and you
10 laid the head so that the head would be -- be next to the
11 victim's right arm just above the --

12 A. It would be actually contacting and overlying the
13 area of contusion above the elbow.

14 Q. And it still is -- is difficult to see anything in
15 this photograph that might constitute bruising, some
16 discoloration?

17 A. That discoloration doesn't really -- that's livor
18 mortis that we're seeing there, so that's really not a
19 bruise. So we don't really have a photo that shows the
20 bruise.

21 THE COURT: Mr. Hammond, what is the number of
22 the photo you're displaying?

23 MR. HAMMOND: That one, your Honor, is
24 Exhibit 2927.

25 THE COURT: Thank you.

1 BY MR. HAMMOND:

2 Q. The other photograph is 29 -- 2929. And this is a
3 photograph taken at about the same time on the 14th of
4 July; is that correct?

5 A. Yes, sir.

6 Q. And what you've done here is you've simply rotated
7 the head of the golf club up a little bit or to the --

8 A. Two things I've done to it. This is a bruise that
9 goes over the wrist. But this is the bruise the previous
10 photo showed the shaft of the club and then the head of the
11 club and this is the indentation of the arm where the head of
12 club was placed before. Now all we have is that's what the
13 skin and soft tissue of the arm and forearm appear to be, and
14 then this is just a club in there for comparison and
15 location. It's not overlying the wound.

16 Q. It's not overlaying the wound and it now exposes
17 this area that I'm outlining with the laser pointer which you
18 say is an indentation?

19 A. Both indentation and contusion.

20 Q. And you think this indentation and contusion among
21 the things that could have caused that is the golf club?

22 A. Yes, sir.

23 Q. That's your -- that's your opinion?

24 A. Yes, sir.

25 Q. Did you do at the time of your autopsy an x-ray?

1 A. I don't recall whether we have x-rays of this or
2 not.

3 Q. If I told you that no x-ray appears in the record
4 from the 3rd of July, would that be inconsistent with your
5 memory that this particular photograph was taken later? But
6 at the time of the autopsy when you were theorizing that the
7 contusions could have been caused by a golf club, no x-ray
8 was taken; is that right?

9 A. I don't recall whether any x-rays were taken.
10 X-rays are not -- not routinely taken because of the way we
11 have to go through the hoops to get them taken here, and I
12 don't know whether there are any x-rays or not. I don't have
13 any independent recollection of any x-rays.

14 Q. Do you have -- have any quarrel with the idea that
15 if -- if someone was struck hard enough to cause the
16 indentation that you see here that it would have been
17 professionally good practice to have had an x-ray done so
18 that you could see whether there was any fracture to the
19 underlying bone?

20 A. No, not necessarily. I have -- I have actually
21 more fragile bones that are under the shaft that I can tell
22 by -- by my inspection are not broken. It would be another
23 way to -- it would be another way to prove it, but there are
24 no fractures there.

25 Q. So the -- the practice in Yavapai County when there

1 are contusions that -- that reveal themselves in an autopsy
2 that the practice is not to do an x-ray?

3 A. Typically not.

4 Q. What about in Maricopa County?

5 A. In Maricopa County in this particular setting, that
6 would probably not be x-rayed either, but the head would have
7 been -- there would have been a routine -- in fact, every
8 homicide case, I would do a routine skull, chest, and
9 abdomen, but rarely we do extremities even with the injury.

10 Q. Doctor, is it not reasonable for -- for us to
11 conclude that that indentation wasn't visible at the time of
12 the autopsy -- at the autopsy because it simply didn't exist?

13 A. The indentation, that's a possibility. The
14 bruising is there, but I did not observe it and so if I
15 didn't observe it, I would like to think I was careful enough
16 that I would have seen that it was there.

17 Q. The bruising you say exists, but as you've seen in
18 the photographs, we can't see it?

19 A. It's because it isn't photographed in a way to show
20 it.

21 Q. So -- so what we have to rely on is your memory
22 that -- that the -- that -- that there was bruising that
23 conforms as you now say possibly to the head of a golf club?

24 A. As I said then too.

25 Q. What you've also said several times that -- that

1 these lacerations could have been caused by any number of
2 implements.

3 A. You need to be more precise on --

4 Q. I'm sorry. I shouldn't use the word lacerations.
5 Excuse me. I meant to use the word contusion. These
6 contusions that you saw could have been caused by any
7 rod-like --

8 A. These two here, yes. Any rod-like object could do
9 it.

10 Q. And the -- the idea that it was a golf club that
11 might have done it was something that actually came to you at
12 the time of the other experiment that you did on the 14th
13 of July?

14 A. No, sir. That occurred to me the day I did the
15 autopsy. When I first saw the bruising and these two
16 patterned injuries on the forearm, that was the first object
17 that came to mind would be likely object to produce those
18 injuries.

19 Q. And indeed you had that idea or one like it at the
20 time of the autopsy?

21 A. Yes, sir.

22 Q. You said to the gathered group there that, oh, this
23 might be a golf club?

24 A. Words to that effect, yes, sir.

25 Q. And you know that people who heard you thought, oh,

1 well, that makes sense; it could be a golf club?

2 A. I think it was a logical observation, yes.

3 Q. And then when you came back 11 days later on -- on
4 the 14th of July, they actually had a golf club?

5 A. They did, yes, sir.

6 Q. And they laid that golf club down and, voilà,
7 your -- your speculation at the time of the autopsy seemed to
8 have been confirmed?

9 A. It wasn't refuted at least.

10 Q. At least in the -- in the minds of -- of yourself
11 and some of the people who were present?

12 A. Yes, sir.

13 MR. HAMMOND: I have no further questions,
14 your Honor.

15 THE COURT: Thank you, Mr. Hammond.

16 Mr. Butner, redirect?

17 MR. BUTNER: Yes, Judge.

18 I need to track down a couple of exhibits,
19 Judge.

20 THE COURT: Okay.

21 (Brief pause.)

22

23 R E D I R E C T E X A M I N A T I O N

24 BY MR. BUTNER:

25 Q. Okay. Dr. Keen --

1 MR. BUTNER: May I approach, Judge?

2 THE COURT: Yes.

3 BY MR. BUTNER:

4 Q. Let me show you what's been marked as Exhibit
5 Number -- it's been admitted into evidence as Exhibit
6 Number 2921, and it's image 2992. Do you recognize that
7 particular exhibit?

8 A. It's a photo taken at the time of the autopsy, yes,
9 sir.

10 Q. Okay.

11 A. And it's of the right arm and forearm.

12 Q. And in that particular photograph, you can see the
13 rod-like bruises on the forearm; right?

14 A. Yes. And a demonstration rod over one of them.

15 Q. Right. And can you see bruising in the area that
16 is just above the elbow in that particular photograph?

17 A. You can see some bruising.

18 Q. And that was bruising in the area where you placed
19 the golf club head; is that correct?

20 A. Subsequently, yes.

21 Q. Okay. So this is actually the bruising that you
22 saw when you thought, well, there's a golf club-type object
23 that may have made this?

24 A. Yes, sir.

25 Q. This type of injury. And the bruising area that

1 you saw is just below the pointer; right? Whoops. Would you
2 point to the area where you noted the bruising on the upper
3 right arm of the victim?

4 A. Actually, lower right arm.

5 Q. Or lower right arm. The area above the elbow;
6 right?

7 A. Yes, sir.

8 Q. Okay. And you didn't find any indentation that
9 day; is that correct?

10 A. I didn't perceive any indentation, no.

11 Q. Did you feel her arm to see if there was an
12 indentation there?

13 A. I felt, but I did not perceive any.

14 Q. Okay. And then back on the 14th of July of the
15 year 2008, that's when you did the comparison with the golf
16 club; right?

17 A. Yes, sir.

18 Q. And by the way, on -- on the date of July the 3rd
19 of the year 2008, did you take any objects and press them
20 against the arm of the victim, Carol Kennedy, in this case to
21 make an indentation?

22 A. No. I -- as is depicted in this photo, that's just
23 a light application of an arrow across the pattern of the
24 contusion. It's just the weight of the fiberglass arrow.
25 It's not pressing much of anything.

1 Q. And when you completed the autopsy, what was -- on
2 July the 3rd of the year 2008, what was done with her body?

3 A. Put it back into cold storage first.

4 Q. Okay. Was it put back in the big plastic bag?

5 A. Yes.

6 Q. And then it was put back in the cold storage?

7 A. Yes, until --

8 Q. Was there anything stored with her body at that
9 point in time to cause some sort of indentation on her -- on
10 her arm above her elbow on the right side?

11 A. No, sir.

12 Q. And then when you looked at her -- did you take
13 anything down to Phoenix with you back in the bed of the
14 pickup truck that would cause such an indentation?

15 A. No, sir.

16 Q. You had her body bungeed in the back there --

17 A. Yes, sir.

18 Q. -- when you took it down there?

19 A. The bag was bungeed in, and it was -- it was an
20 empty bed otherwise.

21 Q. Were you familiar with the cold storage
22 circumstances down at the Maricopa County Medical Examiner's
23 Office?

24 A. Very intimately.

25 Q. And are there -- was her body stored with any kinds

1 of objects down there to your knowledge?

2 A. Not to my knowledge.

3 Q. Let me show you what's been admitted into evidence
4 as Exhibit Number 2930. First I'm going to show this to you
5 personally up close so to speak. Do you recognize that?

6 A. I do.

7 Q. And what is that?

8 A. This is a photo taken on the 14th at the time
9 when we were demonstrating the patterns of contusion and how
10 they could conform to a golf club, and unlike the previously
11 most recently seen exhibit, this is -- this is applied not on
12 the lower, but on the more distal pattern of injury.

13 Q. Before taking those photographs with the golf club
14 laying it across the forearm of Carol Kennedy, did you note
15 the presence of the indentation before you did that?

16 A. Yes, sir.

17 Q. So the indentation was there before you laid the
18 golf club across her arm?

19 A. Yes, sir.

20 Q. You didn't lay the golf club across the arm and
21 press it in?

22 A. I did not.

23 Q. And was the bruising also present?

24 A. The bruising was and still is.

25 Q. You can see a little bit of bruising in this

1 photograph also?

2 A. You see a little bit of bruising most conspicuous
3 towards the elbow surface of the indentation.

4 Q. Okay. Would you point to the area of bruising that
5 you observed on her arm?

6 A. This area right here.

7 Q. And is that also the area of indentation that you
8 noted?

9 A. It's the edge of the indentation. The indentation
10 is approximately this area right here, and along this portion
11 of it is the bruise.

12 Q. Now, Dr. Keen, you've done thousands of autopsies
13 you testified; right?

14 A. Yes, sir.

15 Q. To your knowledge, have you done any cases where
16 somebody was killed with a golf club besides this case?

17 A. I don't think so.

18 Q. When you were doing this autopsy, what was it that
19 caused you to think that it was a golf club?

20 A. Well, the first thoughts were these injury patterns
21 on the arm. Unequivocally, the parallel contusions are what
22 we would call a rod injury, and a rod injury is made by an
23 object which is rounded. But when I saw the bruising above
24 the elbow, it now moves and my thought processes from just a
25 rod injury to something that's rod-like with an expansion and

1 the expansion being to my thought maybe a golf club.

2 I entertained that thought, but then when I go
3 to looking at the lacerations of the scalp and most
4 particularly the lacerations on the right side of the skull,
5 the lacerations overlies the fracture, in fact, the fracture
6 which has multiple bone pieces, but the one major large curve
7 fracture is under one of those lacerations, but it intersects
8 also with a laceration that's at a different angle to it,
9 more than one strike. This still reminded me of a golf club.

10 Q. So you started off -- you hadn't gotten down to the
11 skull fractures yet when you started to form an opinion that
12 a golf club may have caused this?

13 A. No. I was -- I started with -- my golf club
14 thinking was with the soft tissue injuries of the forearm and
15 arm. The lacerations of the scalp, I start with a much wider
16 menu of possibilities, which gets progressively narrowed down
17 as I look at the laceration and the underlying fracture.

18 Q. And you -- you haven't offered your opinion to a
19 reasonable degree of medical certainty concerning the usage
20 of a golf club, have you?

21 A. No.

22 Q. Basically, you have suggested that these injuries
23 are consistent with a golf club if I understand your
24 testimony?

25 A. That is my testimony.

1 Q. Are you aware of these injuries being caused by
2 some other type of instrument?

3 A. No.

4 Q. Have you tried for a long time to think of some
5 other type of instrument?

6 A. Well, I very quickly think of and dismiss, thought
7 of and dismissed a variety of things which you may see in
8 beating-type deaths. They just -- the injuries just don't
9 conform to those other kinds of objects.

10 Q. Let me show you what's also admitted into evidence
11 as Exhibit Number 2922. You've seen that particular
12 photograph before; right?

13 A. I have.

14 Q. And what's depicted in that photograph?

15 A. This is an earlier -- this is an early on photo at
16 the time of the autopsy on July 3rd to show the patterns of
17 the injury to the flexed right arm bent at the elbow. It has
18 the rod-like injuries going to the wrist, the rod-like
19 injuries going across the proximal forearm, and bruising over
20 the side of the distal arm.

21 Q. So you can see the bruising in that photograph
22 also; is that correct?

23 A. Actually, you can see it a little bit better than
24 you can in some of these others.

25 MR. BUTNER: Judge, I would like to publish

1 Exhibits 2921 and 2922 to the jury at this time. And when I
2 say publish, I mean pass them around to them so that they can
3 take a look at these photographs themselves.

4 THE COURT: You may do that.

5 MR. BUTNER: Thank you.

6 (Brief pause.)

7 MR. BUTNER: Judge, I have one other
8 photograph that kind of goes with those and I would like to
9 ask a couple quick questions while the jurors are looking at
10 that and then publish that also. Okay?

11 THE COURT: All right.

12 MR. BUTNER: Thank you.

13 BY MR. BUTNER:

14 Q. Let me show you what's been admitted into evidence
15 as Exhibit Number 2920, Dr. Keen. Do you recognize that
16 particular photograph, sir?

17 A. Yes, sir. Also taken roughly the same time.
18 What's different about this photo is there's an ABFO ruler so
19 we can see its size.

20 Q. Okay. And you're measuring the rod-like
21 injuries --

22 A. Yes, sir.

23 Q. -- is that correct?

24 A. Yes, sir.

25 Q. And do you also see a little bit of injury to the

1 area above the elbow in this particular photograph?

2 A. You see -- yes.

3 Q. What do you see in regard to that injury?

4 A. You see what looks like two small abrasions.

5 Q. And you noted those at the time of the autopsy?

6 A. Well, they're just part of that -- those are again
7 part of that whole head-like injury above the elbow.

8 MR. BUTNER: I'd like to publish this also,
9 Judge.

10 THE COURT: All right.

11 MR. BUTNER: Thank you.

12 (Brief pause.)

13 THE BAILIFF: I will return the exhibits to
14 counsel, your Honor.

15 THE COURT: Thank you.

16 MR. BUTNER: Thank you.

17 BY MR. BUTNER:

18 Q. Before Dr. Fulginiti received the body of Carol
19 Kennedy for her examination and analysis, did you talk with
20 her about your theories about what type of instruments or
21 instrument was used to cause these injuries?

22 A. No, sir.

23 Q. Did you communicate with her at all about a golf
24 club being used to cause these injuries?

25 A. Don't think so, sir.

1 Q. Were you careful to not do that?

2 A. I -- I try to be very careful not to communicate
3 it. I didn't want to prejudice her examination.

4 Q. And had you spoke -- when you -- when you took the
5 body down to Phoenix, had you spoken with Dr. Fulginiti
6 before that time?

7 A. No.

8 Q. About this case at all?

9 A. No.

10 Q. Do you recall when the first time was that you
11 spoke with her about this case?

12 A. I don't accurately recall when I spoke with her
13 about it. It was -- it was not until after her exam I know.

14 Q. So she had already finally received the body of
15 Carol Kennedy and conducted her exam before you spoke with
16 her about it?

17 A. Yes.

18 Q. You aren't the person that made arrangements with
19 her to get the body of Carol Kennedy, are you?

20 A. I'm not.

21 Q. In fact, was that part of the problem when you took
22 it down there, you had not made arrangements with her to
23 receive the body of Carol Kennedy for analysis?

24 A. I won't jump to any conclusions to what the problem
25 was.

1 Q. Okay. But you had not made any arrangements with
2 her prior to your taking the body down there, had you?

3 A. I had not.

4 MR. BUTNER: Judge, I know this is a little
5 bit early, but we have some photos that have been redacted
6 that we would like to take up with the Court, and I think it
7 would be a good time.

8 THE COURT: Ladies and gentlemen, we'll take
9 an afternoon recess at this time. Please remember the
10 admonition not to talk about the case among yourselves and
11 all those other parts of the admonition as well, recall all
12 of that. And take about a 20-minute recess. Let's please
13 reassemble at 10 till.

14 And, Dr. Keen, you may step down as well, but
15 I'll wait for all the parties remaining.

16 (Brief pause.)

17 THE COURT: Thank you. Please be seated.

18 As a matter of fact, counsel, let's take about
19 a few minutes before we start up again.

20 MR. SEARS: Thank you, your Honor.

21 (Recess from 2:32 p.m. to 2:53 p.m.)

22 THE COURT: Please be seated. Thank you.

23 We are on the record with Mr. DeMocker. The
24 attorneys are present. All the attorneys are present, and
25 the jury is not.

1 Mr. Butner, you indicated there are some
2 concern with photographs or exhibits.

3 MR. BUTNER: Yes, Judge. Earlier I believe
4 Exhibits 2956 and 2957 were admitted.

5 THE COURT: Correct.

6 MR. BUTNER: And there was discussion about
7 that and showing them to the jury. And so what we tried to
8 do over the lunch hour was to prepare a cropped version of --
9 of -- you know, it looks like it's the same photograph in
10 both of them 2956 and 2957.

11 MS. OBERST: One has an ear and one doesn't.

12 MR. BUTNER: Well, they look exactly the same
13 to me. I see an ear in both, so I don't know.

14 But in any event, what I did was prepare a
15 cropped version which I have provided to counsel and I was in
16 hopes that -- here's the cropped version. Without losing the
17 purpose of the photograph, that was about as much as we could
18 take off. And I would like to use that particular photograph
19 as part of redirect of Dr. Keen and have it admitted into
20 evidence and show it to the jury.

21 THE COURT: In lieu of it?

22 MR. BUTNER: In lieu of those, yes.

23 THE COURT: Okay. Mr. Hammond?

24 MR. HAMMOND: Your Honor, when we talked about
25 this earlier, I objected and said that if it -- if it reached

1 a point where they thought it was relevant for some purpose,
2 from our standpoint, we would reconsider, but I have no idea
3 what -- what purpose he intends for this, and without some
4 clear understanding, I would object to using it even with the
5 cropping.

6 I think it is a -- it is a gruesome photograph
7 by any definition, and even cropped, it's I think a
8 photograph that without some reason for it, Dr. Keen clearly
9 admitted that he had incorrectly positioned the skull and
10 that this piece was -- was one that he had his hand on. I
11 just don't understand why we need to do more than that with
12 this jury.

13 THE COURT: He did refer to this photograph
14 though I think to provide that's what he had done; correct?

15 MR. HAMMOND: He did.

16 THE COURT: And Mr. Butner?

17 MR. BUTNER: Judge, this photograph depicts
18 the pieces of bone in their correct anatomical position with
19 the Doctor actually holding them and it shows the curvilinear
20 fracture as it originally exists and I think it's very
21 important to show that to the jury, particularly in
22 connection with the lacerations that the Doctor described.

23 THE COURT: I'll note the Doctor --

24 MR. SEARS: Dr. Keen has reentered the room.

25 THE COURT: Dr. Keen, we are discussing a

1 particular evidentiary point. If I could ask you to remain
2 outside --

3 DR. KEEN: Oh, okay.

4 THE COURT: -- for just a few minutes.

5 DR. KEEN: Fair enough.

6 MR. HAMMOND: Your Honor, I -- I really don't
7 see -- I mean, we -- I put up several photographs of
8 Dr. Fulginiti's that clearly showed the curvilinear fracture.
9 We don't object that there was a curvilinear fracture, so
10 that's not really an issue. This serves, I believe, no
11 purpose other than -- than to -- to inflame the jury with the
12 gravity and gruesomeness of these photographs.

13 THE COURT: And, Mr. Butner, I am having two
14 things going on. One, there are photographs that are
15 admitted that were probative of a point that Dr. -- that was
16 being made with Dr. Keen on cross-examination. Now there is
17 a photograph that has been redacted to some extent and that's
18 being offered and comparing the two would be preferable that
19 this redacted or semi-redacted photo be the one introduced if
20 it need be.

21 But I still would like to know, Mr. Butner,
22 why this photo -- what does this really show that is not
23 something that can be exhibited, explained with either
24 Dr. Fulginiti's photos or the ones that were introduced
25 during direct?

1 MR. BUTNER: Judge, if you'll recall
2 Dr. Keen's testimony, he testified about how it was the
3 combination of the lacerations and the fractures that caused
4 him to really believe that all of these injuries were
5 consistent with a golf club. And this photo -- well, it's
6 Exhibit 2971, image -- I think we have an image number on the
7 back of it. Image 2995 is -- first of all, it was the one
8 that was used by the defense, but, secondly, this photo
9 demonstrates very clearly how the lacerations occurred and
10 the pieces were shattered as a result of this curvilinear
11 fracture and I think that it's a better photo than basically
12 any one we've got other than -- well, it's a better photo and
13 he used it to rely upon. He relied upon it when he was
14 testifying, and I think it's important that the jury see
15 this. It shows how the pieces is -- in this particular
16 instance, there's a piece of bone that's pressed down
17 underneath. It's not visible in any other photos. And then
18 it shows this missing piece right on top and the Doctor's
19 holding it together and it demonstrates how the tissue
20 actually held the bones -- the bone pieces together.

21 MR. HAMMOND: Your Honor, I didn't go into
22 that little piece of bone that -- that the Doctor has put
23 back in there. I think that also is something that wasn't
24 there and is not part of what Dr. Fulginiti did, but this
25 isn't a photograph that was excluded prior to trial for its

1 gruesomeness. I introduced it for a very particular purpose.
2 We've got lots of photographs that show the nature and extent
3 of the injuries.

4 There is -- there is no need I think to
5 exacerbate the problem by showing this one and particularly
6 if he's going to focus on a face of this that I chose not to
7 use in cross-examination. I think he now wants to go beyond
8 the cross-examination and try to introduce the idea that
9 there was a piece of the bone that was driven down into the
10 brain or something like that, which he did talk about on
11 direct, but I did not talk about on cross.

12 THE COURT: That's my concern, Mr. Butner, is
13 it seems to be going beyond the limited use of this evidence
14 during cross, which was to orient Dr. Keen if -- if you will
15 or have him explain how he mixed up the left and right
16 orientation. So this seems to be going beyond that.

17 MR. BUTNER: I don't think it is, Judge, at
18 all. It demonstrates how the problem arose.

19 THE COURT: Well, the photographs were
20 introduced. There was a lot of testimony in that area, an
21 extended period of time on that. I'll -- I'll admit the
22 redacted photo.

23 MR. BUTNER: Thank you, your Honor.

24 MR. HAMMOND: Your Honor, I would ask that
25 you -- that -- that you instruct Mr. Butner not to go beyond

1 the scope of cross. If he does intend to get into this
2 little piece of bone -- and I can identify it for the Court,
3 but I think you can see it. Someone has stuck a little piece
4 of bone into that -- into that curved area.

5 MR. BUTNER: That --

6 MR. HAMMOND: There is no -- there's been no
7 testimony about whether that bone actually fits there or
8 whether it just happened to be something he put in there.
9 It -- if you're ruling that -- that he gets to -- to put in
10 the photograph to show the curvilinear nature of it, we
11 object to it, but so be it. But for them to use this for any
12 other purpose I think is inappropriate.

13 MR. BUTNER: Well, first of all, Judge, nobody
14 stuck a piece of bone in there. This is at the time of the
15 original autopsy on July the 3rd, and that's how her skull
16 appeared at that time. The bone was not removed. It was
17 pressed down into her brain as part of the blows. That's
18 part of the problem in how the confusion arose with Dr. Keen,
19 that the skull was shattered in multiple pieces, and when he
20 went back later on to try and reconstruct, he had difficulty
21 putting it back together. But that piece is in the position
22 it was found in when he was doing the autopsy and reflected
23 the scalp.

24 THE COURT: And that's your avowal is that the
25 relevance of this with regard to what was addressed on cross,

1 the relevance is that it explains why there was confusion by
2 Dr. Keen?

3 MR. BUTNER: That's correct, Judge.

4 THE COURT: Well, that would be the limited
5 nature of its use then on -- on redirect. It cannot go
6 beyond cross. But I want to make sure we discuss that, and I
7 want to make sure there's an understanding as to how far the
8 testimony went during cross so I can make the proper rulings
9 on redirect. That would -- based on that avowal, that would
10 be an appropriate purpose it seems to me.

11 Mr. Hammond?

12 MR. HAMMOND: But he is -- he does want to go
13 beyond that and have the Doctor talk about his opinion that
14 pieces of this were driven down into the brain, and that has
15 nothing to do with -- with how he made this mistake. It will
16 do nothing but -- but -- but fuel the prosecutor's desire to
17 inflame this jury.

18 MR. BUTNER: I will stay away from asking him
19 a question about pieces of bone being driven into the brain.
20 The question really for explanation purposes is the
21 shattering effect of the skull and in multiple pieces and
22 that's demonstrated quite clearly in this photograph and
23 that's what demonstrates how Dr. Keen got confused when he
24 was putting it together. I will not ask him a question to
25 elicit a response of driving a piece of bone into the brain.

1 THE COURT: Well, the area is quite limited,
2 and there has to be real caution taken with regard to
3 leading, not leading into some area that was not raised.

4 MR. BUTNER: Okay.

5 THE COURT: Okay.

6 MR. BUTNER: There's one other photograph,
7 Judge, that I want to use, and that's a redacted photograph
8 also. It's image number 2990, and I provided a copy of that
9 to counsel. Yes, that's the one. And it's Exhibit
10 Number 2970 I thought. Let's see if I can find that. I put
11 these up here. Oh, it's 29 -- I had the exhibit in my hand.
12 I'm sorry. It's Exhibit 2970, Judge. Here it is. And it's
13 a redacted photograph, and it was image 2990.

14 And what is depicted in this photograph are
15 the lacerations and -- on the skull, and the Doctor
16 demonstrated how the lacerations are consistent with the
17 skull fractures.

18 MR. HAMMOND: Judge, this -- this one and
19 several others that he would like to use on redirect are I
20 think entirely inappropriate.

21 First of all, this particular photograph
22 was -- was one that was rejected by the Court as unduly
23 gruesome. The transcript page is -- is page 71 and 72 of the
24 January 15 transcript. They -- the Court said then that they
25 are unduly gruesome for the purposes of this trial, but if

1 they were pertinent to the testimony of Mr. Keen, they could
2 be admissible if appropriately cropped. But this isn't
3 appropriate cropping at all.

4 And, furthermore, I was very careful not to --
5 to bring in any photograph of a laceration. And now there's
6 not only this one, which was -- was deemed gruesome, but
7 there are four others that they used on direct that they want
8 to use now on redirect that I did not go into and I very
9 carefully didn't go into them for exactly this reason.

10 THE COURT: Mr. Butner?

11 MR. BUTNER: Dr. Keen testified repeatedly
12 that the basis of his opinions was not just the bony
13 fractures of the skull, but rather the combination of the
14 fractures and the lacerations in conjunction with each other
15 and I think that was exactly the term he used, conjunction
16 with each other, which formed the basis of his opinion that
17 these injuries were consistent with the usage of a golf club.

18 This particular photograph depicts lacerations
19 that were not depicted in any other photographs, and it's
20 cropped about as much as you can crop a photograph and still
21 have it be useable. Basically everything but the area of the
22 lacerations has been cropped, Judge. And I think that it's
23 appropriate that I be allowed to use that on redirect to
24 clarify the Doctor's answers to the questions and testimony
25 that was elicited by Mr. Hammond.

1 MR. HAMMOND: Judge, I think you might want to
2 look at all of these so that you understand what the impact
3 is of using that in conjunction with these other exhibits
4 that they've handed us and say --

5 MR. BUTNER: I'm not going to use those
6 exhibits, Judge. And, in fact, redacted, cropped
7 photographs of these exhibits have already been admitted into
8 evidence.

9 MR. HAMMOND: But I don't -- I'm saying right
10 now that I don't think that -- that any of these are within
11 the scope of -- of my cross-examination. I stayed away from
12 these photographs for a purpose.

13 THE COURT: There was cross-examination though
14 regarding lacerations and the orientation of the lacerations
15 to the fractures.

16 MR. HAMMOND: There was, but -- but -- and
17 they can ask him if that's the case, but to put these
18 photographs back in front of the jury again and to introduce
19 a new one that was deemed gruesome before, we think is just
20 entirely inappropriate. It really will have the effect of
21 emphasizing what they want to do, which is not the
22 correlation because he's already said he couldn't find any
23 correlation ultimately on the left side of the head. So I
24 think we've got the laceration question dealt with.

25 If Mr. Butner wants to ask him again, that's

1 fine, but to put these exhibits back up here on the overhead
2 and then he'll want to pass them around to the jury too, all
3 of which we think is just really -- I mean, it's over the
4 top.

5 THE COURT: Do you have anything else,
6 Mr. Butner?

7 MR. BUTNER: I'm not planning on passing them
8 around to the jury, Judge.

9 THE COURT: There can be cross-examination
10 obviously regarding the lacerations and fractures. There are
11 a number of exhibits out there where there -- that have been
12 admitted showing the jury some kind of demonstration, photos
13 normally prior to trial.

14 I do know that Judge Lindberg indicated he
15 would look at particular items of relevance. I don't -- I
16 don't see the need to have the photos of the lacerations.
17 I'm not going to allow that photograph.

18 MR. HAMMOND: Judge, I believe that there is
19 one other that -- that the State apparently wishes to -- are
20 you going to try to use this or --

21 MR. BUTNER: You've already used it. That's
22 1234.

23 MR. HAMMOND: Well, but this is -- what
24 they're doing now --

25 MR. BUTNER: I'm not going to use that

1 photograph.

2 MR. HAMMOND: So you're not going to use --

3 MR. BUTNER: Right.

4 MR. HAMMOND: They gave us an unredacted copy.

5 MR. BUTNER: No, it isn't unredacted. I'm not
6 going to use that.

7 MR. HAMMOND: I don't object to him using the
8 cropped version that I used, but I do object to using this
9 photograph.

10 THE COURT: Can I have the number that would
11 be used then, actually on both of them?

12 MR. HAMMOND: It's Exhibit 2934.

13 MR. BUTNER: The one that the Court just said
14 I could use is 2971. You said I could not use Exhibit 2970.
15 I told the Court and counsel that I was not going to use
16 2972, three, four, or five. And that's because basically
17 those photographs are already admitted into evidence with
18 other numbers, Judge. They were used by counsel earlier.

19 THE COURT: Okay.

20 (Brief pause.)

21 THE COURT: I think there are a number of jury
22 questions that will be coming soon so there likely will be
23 another break pretty quick. But if we can get the jury back
24 in.

25 THE BAILIFF: I will get Dr. Keen.

1 THE COURT: Okay.

2 (Brief pause.)

3 THE COURT: Thank you. Please be seated.

4 The record will show the presence of the
5 defendant, all of the attorneys, and the jury as well.

6 Dr. Keen is again on the witness stand.

7 And, Mr. Butner, when you're ready.

8 MR. BUTNER: Thank you, your Honor.

9 BY MR. BUTNER:

10 Q. Okay. Dr. Keen, I'm going to show you what's been
11 admitted into evidence as Exhibits Number 2956 and 2957 and
12 now in a redacted form Exhibit Number 2971. Do you recognize
13 what's depicted in that particular exhibit?

14 A. I do.

15 Q. First of all, when was that particular photograph
16 taken?

17 A. That is taken at the time of the initial autopsy in
18 the afternoon of July 3rd.

19 Q. Okay. And what's depicted in that photograph,
20 Dr. Keen?

21 A. This is at the stage of the examination in which I
22 am reapproximating the fractured pieces of skull, and what is
23 the center of the photo is the right side of the skull.

24 Q. Does this show the pieces of the skull that
25 occurred as a result of the fracture to the skull?

1 A. It shows -- it shows a concentration of fractures
2 and pieces that are marginating around that, but there are
3 more fractured pieces.

4 Q. Okay. And you called -- I think you said you
5 referred to it as the galea?

6 A. The galea.

7 Q. Galea. And that is -- what is the galea?

8 A. That is the connective tissue layer that comes
9 right over the outer surface of the periosteum. It's -- it's
10 nonbone, but it's a fibrous connective tissue of the bones
11 that hold together.

12 Q. And as a result of the multiple pieces depicted in
13 this particular photograph, are they -- are they held
14 together to some extent by the galea?

15 A. To some extent, they are. In the photo, you'll see
16 some places that look very pale in those areas where the
17 towel actually slipped the galea off to expose the bone. But
18 where you see the reddish discoloration on the surface here,
19 that's galea.

20 Q. And does this demonstrate how the confusion arose
21 when you tried to reposition the bone -- the bones of her
22 skull on July 14th of the year 2008?

23 A. More precisely what it shows is how the skull was.
24 The confusion arises 11 days later when we're trying to put
25 pieces back together.

1 Q. This is an accurate depiction of how the skull was
2 when you were doing the autopsy; is that right?

3 A. Yes, sir.

4 MR. BUTNER: Okay. Judge, I would like to
5 show this to the jury now on the overhead.

6 THE COURT: 2971 is being offered then at this
7 time?

8 MR. BUTNER: Yes.

9 THE COURT: Okay.

10 MR. HAMMOND: Subject to the objection.

11 THE COURT: 2971 is admitted.

12 MR. BUTNER: Thank you.

13 BY MR. BUTNER:

14 Q. Okay. Dr. Keen, would you use the laser pointer to
15 point to the galea?

16 A. It's these kinds of areas like this. The reddish
17 discoloration. You can see where it crosses a gap here.
18 It's still trying to hold pieces somewhat together.

19 Q. And is the curvilinear fracture depicted in the
20 photograph?

21 A. It is right here.

22 Q. And there are multiple pieces there; is that
23 correct, sir?

24 A. Yes. If you would turn it 90 degrees to the right,
25 we would all appreciate it a little bit more that we really

1 are talking about the right side instead of looking at it
2 from the top and behind.

3 Q. 90 degrees to the right like this?

4 A. Yes, sir.

5 Q. Like that?

6 A. Yes, sir.

7 Q. All right.

8 A. Now you can visualize the center of this fractured
9 area is really the temple area, the side of the skull.

10 Q. And were there corresponding lacerations visible on
11 the scalp for those fractures?

12 A. Yes. There's a laceration that overlies this area.
13 There's a laceration that overlies transecting over in this
14 area and then there's a third one behind.

15 Q. Let me show you what's been admitted into evidence
16 as Exhibit Number 2925.

17 MR. HAMMOND: Your Honor, this is one of the
18 exhibits that I objected to as beyond the scope of
19 cross-examination. And, your Honor, could I have it removed
20 until we have a chance to rule on the objection?

21 THE COURT: Yes, at this point.

22 We could have a side bar.

23 (Discussion off the record.)

24 THE COURT: Mr. Butner.

25 MR. BUTNER: Thank you, your Honor.

1 BY MR. BUTNER:

2 Q. Dr. Keen, did you correlate each of the lacerations
3 depicted in this particular photograph, Exhibit Number -- I
4 think it was Exhibit Number 2925. Yes, Exhibit Number 2925
5 already admitted into evidence. Did you correlate these
6 lacerations with the fractures of the skull?

7 A. Yes, sir. That was the attempt I made. And to
8 some degree, I was successful.

9 Q. And first of all, how many lacerations were there?
10 We're looking at the right side of the victim's skull; is
11 that correct?

12 A. Yes.

13 Q. And the skin is still there; right? Her scalp is
14 still present?

15 A. The scalp is present. We have -- in this right
16 perspective, we have three lacerations. There are other
17 lacerations. There's a left frontal and three behind the
18 ear.

19 Q. Would you use the laser pointer to demonstrate the
20 lacerations, please.

21 A. The lacerations we see here, this laceration which
22 corresponds to the curvilinear fracture that we have seen
23 elsewhere. This is the laceration that intersects it, and
24 there's fracturing of the bone beneath that. And then we
25 have a laceration here.

1 Q. Okay. And was there fracturing of the bone beneath
2 the laceration at the rear of her skull also?

3 A. Yes.

4 Q. Was it a curvilinear type of fracture?

5 A. There are some curves to them. The resultant
6 pieces of bone at the occipital or back of the skull vary
7 more along the rectangular than they do the curved.

8 Q. And was this correlation between the lacerations
9 and the fractures and the viewing them in conjunction with
10 each other, was that what caused you to come to the
11 conclusion about the golf club?

12 A. That was -- that was what was leading me in that
13 direction, yes, sir.

14 Q. Okay. Did you find anything that -- that caused
15 you to think that it was not a golf club?

16 A. No, sir.

17 Q. And in regard to the left side of Carol Kennedy's
18 skull, what types of bony injuries were present on the left
19 side of her skull?

20 A. We have what we describe as comminuted and
21 depressed fractures. Comminuted being complex sort of like
22 you get with a hard-boiled egg when the shell is broken where
23 you kind of radiate in various directions. So we have
24 multiple comminuted fractures over the left side of the head,
25 and they were displaced downward.

1 Q. Was that more of a shattering type of effect if you
2 will?

3 A. I would -- that's a fair way to characterize them,
4 yes.

5 Q. Okay. Let me show you what Mr. Hammond placed into
6 evidence as Exhibit Number 2962. Do you recognize what's
7 depicted in that particular photograph?

8 A. Yes. This is the left side of the skull, and it
9 has a concentration of multiple fractures.

10 Q. And can you tell any point or points of impact on
11 the skull?

12 A. There appears to have been -- this line of
13 fracturing and this line of fracturing are approximately the
14 locations of two of the three vertical lacerations on the
15 left side of the head. And some of the areas where we
16 actually have isolated portions of bone, they have received a
17 greater intensity and, in fact, we have one missing here at
18 this point, but we have a concentration of force at those
19 points.

20 Q. Are these the type of fractures that can occur when
21 there's resistance on the opposite side at the time that the
22 blow is struck to the skull?

23 A. That's a possible way to do it, yes, to inflict it.

24 Q. In other words, the victim's head could be laying
25 on the ground and somebody could strike them and cause those

1 types of injuries?

2 A. Yes, they can do that.

3 Q. Did you see anything inconsistent with that?

4 A. No.

5 Q. And then you talked about lacerations that ran
6 vertically on the left-hand side of the victim's skull; is
7 that correct?

8 A. Yes, sir.

9 Q. In your view, Dr. Keen, were those lacerations that
10 went vertically on the victim's skull consistent with the
11 usage of a golf club as the instrument of Carol Kennedy's
12 death?

13 A. Yes, sir.

14 Q. Let me show you what's been admitted into evidence
15 as Exhibit Number 2948. Do you recognize what's depicted in
16 that particular exhibit, Dr. Keen?

17 A. This is the left side of the face. There's the
18 nose. There's the ear. And in the scalp, we have
19 lacerations.

20 MR. SEARS: Excuse me, Mr. Butner.

21 BY MR. BUTNER:

22 Q. Go ahead.

23 A. We have vertical lacerations. We have ones not so
24 clear here, but we have this tear and this tear and these two
25 are the ones that roughly approximate in the previous exhibit

1 where we have vertical lines of fracture in the skull.

2 Q. So those correspond then with those comminuted
3 fractures that are beneath the lacerations on Carol Kennedy's
4 skull?

5 A. They overlie them, yes.

6 Q. And did you see anything that was inconsistent with
7 those injuries and the usage of a golf club?

8 A. No, sir.

9 Q. Dr. Keen, did you -- did anybody suggest to you at
10 the start of the autopsy that a golf club was a possible
11 instrument of Carol Kennedy's death?

12 A. No.

13 Q. You started this autopsy at 3:45 on the afternoon
14 of July the 3rd, 2008 approximately; right?

15 A. Yes, sir.

16 Q. Okay.

17 MR. HAMMOND: Your Honor, could we ask that
18 this exhibit be taken down?

19 MR. BUTNER: Yeah, I'll take it down.

20 THE COURT: Thank you.

21 BY MR. BUTNER:

22 Q. And did you come to your own conclusion concerning
23 the fact that a golf club was the possible instrument of
24 Carol Kennedy's death?

25 A. Yes, sir.

1 Q. And when you were answering Mr. Hammond's questions
2 about that piece of bone that you had positioned in the wrong
3 place when you reconstructed her skull, was there anything
4 about your repositioning of that bone in the wrong place that
5 causes you to change your view that a golf club was the type
6 of instrument that was used to kill Carol Kennedy?

7 A. No.

8 Q. Does the curvilinear fracture designation still
9 apply?

10 A. The curvilinear fracture designation still applies.
11 It -- but more accurately, it's -- it's in the other
12 position.

13 Q. You noted the presence of fractures directly on top
14 of Carol Kennedy's head; is that correct?

15 A. Yes, sir. There are fracture lines that go clear
16 across the top.

17 Q. Let me show you what has been admitted into
18 evidence by Mr. Hammond as Exhibit Number 2964. Do you
19 recognize what's depicted in this particular photograph,
20 Dr. Keen?

21 A. Yes.

22 Q. What is it, sir?

23 A. We're looking primarily on the top of the skull and
24 we're seeing transverse and curving fractures and some what
25 we call diastatic fractures where they break across the

1 suture lines.

2 Q. Would you -- you know, you were moving that laser
3 pointer around a lot. Would you go slowly. Now, that --
4 that's the front of -- of the victim's head; is that correct,
5 where you have the laser pointer now?

6 A. If you visualize looking at the top of the skull,
7 this would be the nose, this is the front and this is the
8 back, and these are fracture lines that are concentrated both
9 as we saw before on the left and coming right across the top
10 and then on the right.

11 Q. Okay. Are these the type of fractures that you
12 just pointed out to the jury that can occur from somebody
13 having their head rammed into something?

14 A. That's a possible way, yes.

15 Q. Is that particularly possible if they've already
16 had their skull compromised from a fracture on one side or
17 the other?

18 A. Once it's -- yes. Once you disturb the integrity
19 of the arch of the skull, it takes less of an impact to
20 create all the other kinds of fractures whether you strike
21 them or impact them or however.

22 Q. Okay. Is there anything about these types of
23 injuries, these fractures that are on the top of her skull
24 that is inconsistent with a golf club being used as an
25 instrument to kill Carol Kennedy?

1 A. No.

2 Q. Are there -- is there some other type of object
3 that could have been used to cause these types of fractures?

4 A. Fractures alone could possibly be produced by
5 other -- other instruments, but when you take into account
6 the very similar character of the lacerations that are over
7 the left side and over the back side, I -- I still think it's
8 a golf club.

9 Q. So it was the combination of the lacerations with
10 the fracture -- fractures beneath them that caused you to
11 form your opinion?

12 A. Yes, sir.

13 MR. BUTNER: No further questions.

14 THE COURT: Thank you.

15 Ladies and gentlemen, there are questions from
16 the jury. I see there are some. I'm going to let you get
17 those written up and get an idea about how many questions we
18 have and that would gauge how long I need to have a recess to
19 go over them with the attorneys. There are a number of
20 questions, and we do need to take a recess in order to do
21 that as you know. Please remember the admonition. I'll ask
22 you to reassemble at 4:00 o'clock.

23 Dr. Keen, I am going to ask you to please
24 excuse yourself while we go over the questions at this time.

25 And, Phil, if you'll come back and get them

1 copied, we'll start up as soon as we can.

2 Thank you. We'll be in recess.

3 (Recess from 3:37 p.m. to 3:39 p.m.)

4 THE COURT: Okay. Please be seated.

5 Maybe we can get the screen down. Thank you,
6 Mr. Hammond.

7 (Brief pause.)

8 THE COURT: Thank you. And please be seated.

9 While Phil is copying the questions, I think
10 the attorneys want to make a record on the side bar, so I'd
11 like to do that. Mr. Hammond.

12 MR. HAMMOND: Your Honor, we -- we did object
13 and discussed at side bar the -- the problem that we foresaw
14 with the use of the last couple of photographs that showed
15 lacerations of the -- of the scalp. I -- I -- I can see no
16 good reason for -- for -- for what they did other than them
17 to put these photographs again in front of the jury so that
18 the jury can be subjected to them.

19 As I said both on the record before and at
20 side bar, we were careful not to use those photographs
21 ourselves because they absolutely prove nothing. You can
22 have a witness sit up there on the witness stand and say he
23 can see something, but -- but the fact of the matter is there
24 is nothing there for him to see other than -- than to -- to
25 put these pictures in front of the jury so that the jury can

1 be offended by them as are we.

2 But I thought that we had had an understanding
3 and the record will show whatever it was, but I thought that
4 Mr. Butner had -- had agreed that other than -- than the one
5 exhibit which you allowed in that he wasn't going to use the
6 others. And then -- and then he puts it up on the overhead.
7 And to me, it seemed obvious that this was -- was a highly
8 prejudicial thing to be doing in front of a jury on redirect.
9 It's one thing for him to do it on direct when I still have
10 the opportunity to cross-examine. It's another thing to do
11 it on redirect. And I think the gruesomeness of it could not
12 be heightened any more than it is when somebody puts it up
13 the end of a long day of examination.

14 So that's the basis of my objection.

15 THE COURT: Mr. Hammond, Mr. Butner, these are
16 after-the-fact records, and I do prefer to have a
17 contemporaneous record made as you know, but your position on
18 the photos that -- well, 2971 that was admitted and then the
19 others that were used to illustrate lacerations during
20 redirect.

21 MR. BUTNER: Judge, the Doctor testified quite
22 clearly on cross-examination, but without usage of the
23 photographs, that basically he -- he examined the victim's
24 skull after he had reflected the scalp and looked at the
25 fractures at that point in time and he had previously looked

1 at the lacerations and it wasn't merely the fractures and it
2 wasn't merely the lacerations. The word he used was in
3 conjunction with each other. He said it was the lacerations
4 and the fractures in conjunction with each other.

5 Mr. Hammond very artfully confined his
6 cross-examination and tried to narrow the Doctor's opinion to
7 be reliant solely upon the fractures, but that's not what the
8 Doctor said. And in order to clear that up, it was necessary
9 for the State to put on -- basically to put on two pictures
10 of lacerations to the skull and I compared those two pictures
11 of lacerations to the victim's head with the fractures on the
12 skull of the victim and that's exactly what the Doctor
13 testified was the basis of his opinion and why he felt that
14 all of these injuries were consistent with the usage of the
15 golf club as the instrument for Carol Kennedy's death.

16 So there was no effort on the part of the
17 State to -- to inflame or offend the jury or anybody else.
18 But rather this was basically the minimum that could be done
19 in order to link those lacerations with the fractures.

20 And if the Court will note, I said I was going
21 to use a golf club and a picture with a golf club in it and
22 I stayed away from that and confined it solely to just two
23 pictures and then, of course, the underlying pictures of the
24 fractures.

25 So that's my record on it, your Honor. And I

1 did the best that I could on that to narrow it and keep it
2 from -- from being troubling to the jury or more gruesome
3 than it had to be.

4 THE COURT: I looked at the Amaya Ruiz case
5 this morning and that has a section dealing with photographs
6 and I applied the Rule 403 balancing test in the context of
7 the gruesome photos and I found that there was relevance and
8 that the photos were not being offered strictly to inflame
9 passions or for an improper purpose, that they were
10 appropriate to illustrate testimony, and that was a finding
11 I made and now we made the record.

12 Anything else on that from counsel?

13 MR. HAMMOND: No, your Honor.

14 THE COURT: Okay. Then if we could look at
15 the questions. Does everybody have copies now? I have
16 numbered them before they were copied. So we can just start
17 by numbering.

18 Okay. Number 1 is: Does the reconstruction
19 photo evidence from the forensic anthropologist change your
20 opinion about the number of blows to the skull?

21 Any objection, Mr. Butner?

22 MR. BUTNER: No objection.

23 THE COURT: Mr. Hammond?

24 MR. HAMMOND: No.

25 THE COURT: 1 will be asked.

1 2: In your opinion, could foreign DNA be
2 transferred to Carol's nail clippings from the clippers you
3 used?

4 Any objection, Mr. Butner?

5 MR. BUTNER: No objection, Judge.

6 THE COURT: Mr. Hammond?

7 MR. HAMMOND: No.

8 THE COURT: 2 is asked.

9 Several parts on 3. Dr. Keen, were you able
10 to determine which blows to the head -- which injuries she
11 received first or last? Can you tell the time frame of
12 blows, i.e., injuries?

13 Any objection to that part, Mr. Butner?

14 MR. BUTNER: No objection, your Honor.

15 THE COURT: Mr. Hammond?

16 MR. HAMMOND: No.

17 THE COURT: Asked.

18 2: Were you able to determine the position of
19 the victim's body when receiving the blows to the head? Did
20 she have to be lying down or could she be standing?

21 Objection, Mr. Butner?

22 MR. BUTNER: No objection.

23 THE COURT: Mr. Hammond?

24 MR. HAMMOND: No.

25 THE COURT: 2 is asked.

1 3: How high or how hard did the blows have to
2 be in order to do this damage?

3 Objection, Mr. Butner?

4 MR. BUTNER: No objection.

5 THE COURT: Mr. Hammond?

6 MR. HAMMOND: I'm not sure he has a foundation
7 to answer anything with respect to -- to something that might
8 relate to the crime scene, and he testified on direct he
9 didn't go to the crime scene. I'm not sure that that's
10 what's being asked, but I'm not sure what how high means.

11 THE COURT: That's confusing to me. The
12 second part I understand. I don't know exactly how he would
13 quantify that, but he --

14 MR. HAMMOND: I also -- I also think he has no
15 foundation to answer questions about -- about how much -- how
16 much force would have to be used or how hard they would have
17 to be. That's a -- that's a specialized field of
18 biomechanics. He didn't -- he didn't testify in the field of
19 biomechanics. He's not an expert in that field.

20 THE COURT: Anything else on that, Mr. Butner?

21 MR. BUTNER: No.

22 THE COURT: Yeah, I'm not going to ask part 3.
23 And number 4 isn't really a question.

24 4: Did you scrape under the fingernails
25 before you clipped them?

1 Any objection, Mr. Butner?

2 MR. BUTNER: No objection.

3 THE COURT: Mr. Hammond?

4 MR. HAMMOND: Nope.

5 THE COURT: Okay. Have you ever performed
6 this level of investigation on any Yavapai County case
7 before, such as reconstructing the skull or delivering a body
8 to the Maricopa lab?

9 Objection, Mr. Butner?

10 MR. BUTNER: No objection.

11 THE COURT: Mr. Hammond?

12 MR. HAMMOND: Nope.

13 THE COURT: Asked.

14 3: Could you tell if the attacker was
15 left-handed or right-handed? Please explain.

16 Objection, Mr. Butner?

17 MR. BUTNER: No objection.

18 THE COURT: Mr. Hammond?

19 MR. HAMMOND: Same issue, your Honor. I don't
20 think he's qualified to answer that question. He has -- he
21 has no expertise in biomechanics. He wasn't ever at the
22 crime scene. Anything he would say about right-handed versus
23 left-handed would be speculation. I suspect that's why the
24 State didn't ask him during the course of direct examination.

25 THE COURT: Mr. Butner, anything else on that?

1 MR. BUTNER: No.

2 THE COURT: I'm not going to ask 3.

3 4: Photo number 2922 -- that's the exhibit
4 number. Photo number 2922, it looks like the continuation of
5 both rods (red marks above the elbow); is that correct?

6 MR. BUTNER: No objection.

7 THE COURT: Objection?

8 MR. HAMMOND: No objection.

9 THE COURT: 4 is asked.

10 Okay. Now to page 5. You said the blood
11 depth in Carol's right hand was really thick. Did she have
12 anything in her hand?

13 Okay. Any objection?

14 MR. BUTNER: No objection.

15 MR. HAMMOND: No.

16 THE COURT: That first part is asked then.

17 And second: How long was the body in Phoenix?
18 Objection?

19 MR. BUTNER: No objection.

20 MR. HAMMOND: No objection.

21 THE COURT: That will be asked.

22 In photo number 2922 and 2921, is that a third
23 mark on the elbow?

24 Objection?

25 MR. BUTNER: No objection.

1 MR. HAMMOND: No objection.

2 THE COURT: That part's asked.

3 And then finally: If these are defensive
4 wounds in the right arm, how come they are so parallel like
5 she didn't move from one blow to the next?

6 Any objection, Mr. Butner?

7 MR. BUTNER: No objection.

8 THE COURT: Mr. Hammond?

9 MR. HAMMOND: No.

10 THE COURT: That part is asked also.

11 Then on to page 6. May we see photos 23 --
12 2938, 2939, 2934, 2962 through 65?

13 MR. BUTNER: No objection.

14 THE COURT: Mr. Hammond?

15 MR. HAMMOND: Your Honor, I need to look at
16 those. Is this a request that these photos be passed around
17 to the jury?

18 THE COURT: I note they didn't specify. Can
19 we go on to the others and then come back and give you a
20 chance to pull up those specific photos?

21 MR. HAMMOND: Yes.

22 THE COURT: I'm going to label that as part 1.

23 Still on page 6. The next question is: I'm
24 more confused now. Which is the front and which is the back
25 of the skull? Are most of the blows on the right or the left

1 I think it says? Are most of the blows on the right or the
2 left?

3 Any objection to that, Mr. Butner?

4 MR. BUTNER: No objection.

5 THE COURT: Mr. Hammond? It's -- I'm on
6 page 6.

7 MR. HAMMOND: I mean, I don't know how he
8 can -- how he can answer what the back and the front is
9 without having a specific -- I mean, it sounds like almost a
10 generic question.

11 THE COURT: I'll bet it really correlates to
12 the exhibits that this juror wants to see in the first part.

13 MR. HAMMOND: Well --

14 THE COURT: Well, the second part is something
15 that he might be able to answer. Are most of the blows on
16 the right or the left if he knows? What about that part?

17 MR. BUTNER: I'm sorry, Judge. I didn't quite
18 get that.

19 THE COURT: Well, there's a number of parts.
20 First of all, we're deferring until everybody sees what
21 photos are being looked at in the first part of the question.

22 MR. BUTNER: Right.

23 THE COURT: The second part: I'm more
24 confused now. Which is the front and which is the back of
25 the skull, which isn't really a question? Are most of the

1 blows on the right or the left? And I -- the first part I
2 think relates to being able to see those photos again and
3 sort out left and right. The second part though I was asking
4 about asking just that. Are most of the blows on the right
5 or the left?

6 How about just that last part? Mr. Butner, do
7 you object to --

8 MR. BUTNER: No objection, Judge.

9 THE COURT: Mr. Hammond, do you object to
10 that?

11 MR. HAMMOND: No, I do not.

12 THE COURT: Okay. So that part will be asked.
13 And then we can look at the photos. That may clear up for
14 this juror the confusion.

15 Then the last part on 6 is: Can you tell us
16 in your own words what you did differently from the Phoenix
17 doctor with the skull? Did you put it together wrong?

18 Mr. Butner?

19 MR. BUTNER: No objection.

20 THE COURT: Mr. Hammond?

21 MR. HAMMOND: No objection.

22 THE COURT: That is going to be asked.

23 Then on to page 7. How often do you do your
24 own transcription?

25 Any objection?

1 MR. BUTNER: No objection.

2 MR. SEARS: Could that word possibly be
3 transportation? I don't think he ever said he transcribed
4 it.

5 THE COURT: He did say that he did his own
6 transcription on that one aspect.

7 MR. SEARS: He did. Oh, okay. I stand
8 corrected then.

9 THE COURT: Okay. That will be asked then.
10 Mr. Hammond, any objection?

11 MR. HAMMOND: No objection. I didn't really
12 understand the question that way, but maybe he can -- I don't
13 object to him trying to answer.

14 THE COURT: I do recall Dr. Keen actually
15 say -- testifying that he did his own transcription, and I'd
16 have to look back in my own notes to look at the exact
17 context.

18 MR. HAMMOND: I think he was -- I think he was
19 saying he did his own transportation.

20 THE COURT: He did that for that particular
21 instance, but he also said transcription so I'm quite sure.
22 If people want to check their notes on that, then --

23 MR. BUTNER: He did. My notes agree with
24 yours, Judge. He said he did his own transcription.

25 MR. HAMMOND: Oh, oh, oh, I see. I think I

1 understand now. He was talking about the standard form
2 template.

3 THE COURT: Right.

4 MR. HAMMOND: Okay. That's fine with me.

5 THE COURT: Why that sentence was left, I
6 believe the third error. Okay. That will be asked.

7 Part 2: Was your truck bed padded in any way
8 for the trip down to Phoenix to ensure no further damage
9 would happen to the skull?

10 Mr. Butner?

11 MR. BUTNER: No objection.

12 THE COURT: Mr. Hammond?

13 MR. HAMMOND: None.

14 THE COURT: Okay. That's asked.

15 3: How tall is Carol Kennedy, and how much
16 did she weigh?

17 Objection?

18 MR. BUTNER: No objection.

19 MR. HAMMOND: No.

20 THE COURT: Okay. Part 3 is asked. Will be.

21 4: Can you tell from the injuries how tall
22 the attacker might have been? The arm injuries appear to be
23 from an attacker much taller than the victim. We've had
24 questions of this type so far.

25 Mr. Butner?

1 MR. BUTNER: No objection.

2 MR. HAMMOND: Same objection, your Honor.

3 I think that's for someone in the field of biomechanics, and
4 I don't think he has any basis to answer that question.

5 THE COURT: Mr. Butner, anything else on that?

6 MR. BUTNER: Nothing else.

7 THE COURT: Part 4 will not be asked.

8 And part 5: Based on these injuries, would
9 you say a left-handed person or a person using the left hand
10 would have created these injuries?

11 Same position, Mr. Butner? You don't object?

12 MR. BUTNER: No objection, Judge.

13 THE COURT: You do on the same grounds?

14 MR. HAMMOND: Yeah.

15 THE COURT: And for the same reason 5 will not
16 be asked.

17 Okay. Then page 8. 1: And I -- is it
18 pronounced galea?

19 MR. BUTNER: Galea.

20 THE COURT: Galea.

21 MR. BUTNER: Yeah.

22 THE COURT: Is galea the same as fascia
23 tissue?

24 Any objection, Mr. Butner?

25 MR. BUTNER: No objection.

1 THE COURT: Mr. Hammond?

2 MR. HAMMOND: No.

3 THE COURT: That's asked and will be.

4 Part 2: Where is the temple located in
5 Exhibit 2925, image number 3008?

6 MR. HAMMOND: 2925.

7 THE COURT: That does happen to be one of the
8 questions that -- or one of the exhibits that page 6 deals
9 with. Do both of you have that exhibit?

10 MR. BUTNER: 29 -- I don't have it, Judge,
11 but...

12 THE COURT: Let's see if anybody objects to
13 having that displayed and the question answered.

14 MR. HAMMOND: Your Honor, this is one of the
15 photographs that we objected to having put up before. I
16 would -- I would like not to have this put up again.

17 THE COURT: The one that was put up in
18 redirect?

19 MR. HAMMOND: Can I approach and show you
20 this?

21 THE COURT: Oh, yes. Please.

22 (Brief pause.)

23 THE COURT: Mr. Butner, if you'd look at that.

24 MR. BUTNER: Oh, yeah.

25 MR. HAMMOND: I really think, your Honor,

1 we've already had too much of that photograph. I would
2 object to putting that up again.

3 MR. BUTNER: Judge, I think the jury has the
4 right to have that photograph oriented so to speak for them,
5 and I think that's what this question elicits. It's just
6 testimony from the Doctor to orient them to where the temple
7 is located on the victim's head.

8 THE COURT: And this was an exhibit admitted
9 during direct?

10 MR. BUTNER: Yes.

11 MR. HAMMOND: And it was used again in
12 redirect.

13 THE COURT: Right. And -- well, this has been
14 a lengthy cross-examination of Dr. Keen and trying to get him
15 to explain -- or have him explain his opinions and what he's
16 observed. And this is an exhibit that's going to be going to
17 the jury in any event.

18 And that's something I wanted to mention too
19 in my findings if I didn't relating to the side bar
20 discussion and that's the point that these -- these are
21 admitted exhibits in any event. I think, yeah, it could be
22 illustrated and pointed out. It just doesn't need to stay on
23 the overhead, and it's not going to be passed among the
24 jurors. It just can be illustrated to the extent it needs to
25 be illustrated and that's it.

1 Thank you.

2 MR. HAMMOND: Thank you, your Honor.

3 MR. BUTNER: So am I to understand that it can
4 be put on the overhead very briefly and then removed just
5 long enough for the Doctor to point out where the temple is
6 located?

7 THE COURT: Correct.

8 MR. BUTNER: Okay.

9 THE COURT: And then part 9: Exhibits 2927
10 and 2933, could the injuries to the body have to be a
11 left-handed club, or could they be made by any wooden club?
12 Did you test any other clubs?

13 Well, I think part 2 can be asked. But about
14 part 1, Mr. Butner?

15 MR. BUTNER: No objection.

16 THE COURT: Mr. Hammond?

17 MR. HAMMOND: Yeah, I do object to part 1, but
18 not to part 2.

19 THE COURT: Well, part 2 will be asked.
20 Part 1 again gets into a specialty that -- and there just
21 hasn't been any foundation provided on that, and I'm not
22 going to ask the first part.

23 Okay. Then --

24 MR. BUTNER: Judge, it might -- it might be
25 significant to ask could they be made by any wooden club. I

1 think it's kind of a combination question there. I
2 understand the right-handed, left-handed thing, but this is a
3 question that asks for something somewhat different than
4 that.

5 MR. HAMMOND: My suspicion, your Honor, is
6 that in using the word wooden, this particular juror is
7 thinking -- probably not a golfer -- is -- is hearing all the
8 times that we've talked about woods versus irons.

9 THE COURT: Right.

10 MR. HAMMOND: I think that's probably what the
11 witness is saying as opposed to talking about wood versus
12 some other -- some other product.

13 MR. BUTNER: He might be right. I didn't
14 really look at it quite like that.

15 THE COURT: I don't think that this is
16 something Dr. Keen really could answer. So I'll stay with
17 that.

18 Now, if we could go back to that one question
19 I think it was 6, page 6. 2938, 39, 34, 62 to 65. And then
20 I think that goes along with the first part of part 2 and
21 that's -- we haven't really dealt with that.

22 MR. BUTNER: Do you have those exhibits?

23 MR. HAMMOND: We do.

24 MR. SEARS: The question was which is front
25 and back.

1 MR. HAMMOND: No. The question is, can
2 they --

3 THE COURT: May we see the photos and then
4 it's 29, 38, the ones I've listed, 38, 39, 34, 62 to 65. And
5 then the -- then it's part 2: But I'm more confused now.
6 Which is the front and which is the back of the skull? What
7 do those photos depict?

8 MR. BUTNER: The skull.

9 MR. HAMMOND: These are ones that -- that I
10 used on -- on cross and I thought that we had pretty
11 carefully identified front and back, but I think they have
12 been admitted into evidence and, I mean, I guess -- what
13 bothers me about this is we're going to take a lot of time.
14 This is seven photographs. If we have to put up each one of
15 these and have him orient where we are front and back, I
16 think it's -- I think it will take -- if all we're talking
17 about is what's the front and what's the back, I think he can
18 explain pretty easily that in -- in virtually all of these,
19 the front is -- is -- let me just show it to you, your Honor.

20 THE COURT: Yeah. Just please so I can --

21 MR. HAMMOND: It's very clearly -- and he said
22 this several times. The fracturing that he's talked about is
23 on the back. The smooth portion is on the front. You can
24 see it in lots of different angles. I -- I think it's
25 obvious what the front and the back is, but --

1 MR. BUTNER: It's not obvious to me. Some of
2 them are obvious, yes, especially the ones that Dr. Fulginiti
3 did, although in even some of those, it's a little
4 questionable.

5 MR. HAMMOND: My objection is only time. And
6 we may take more time arguing about it than doing it, so...

7 THE COURT: I think maybe they can be placed
8 up there, Dr. Keen can point out front and back, and we can
9 move right through them.

10 And then -- so that's what I -- I'll probably
11 read those in conjunction to display the photos and then just
12 ask which is the front and which is the back of the skull.
13 Is there any objection in just doing it in that fashion?

14 MR. BUTNER: No objection.

15 MR. HAMMOND: No, your Honor.

16 THE COURT: Okay. Thank you.

17 Take just a couple minutes and bring the jury
18 in. Thank you.

19 (Recess from 4:05 p.m. to 4:13 p.m.)

20 THE COURT: Thank you. Please be seated.

21 The record will show the presence of the
22 defendant, the attorneys, and the jury.

23 Dr. Keen is again on the witness stand. And,
24 Dr. Keen, I have the jury questions. And as you probably
25 know, I'll ask you the questions. The lawyers may want to

1 follow up.

2 "Q U E S T I O N S B Y T H E J U R Y"

3 THE COURT: The first question: Does the
4 reconstruction of photo evidence from the forensic
5 anthropologist change your opinion about the number of blows
6 to the skull?

7 THE WITNESS: No, sir.

8 THE COURT: In your opinion, could foreign DNA
9 be transferred to Carol's nail clippings from the clippers
10 you used?

11 THE WITNESS: I can't exclude that
12 possibility.

13 THE COURT: I'll ask kind of a couple
14 questions combined, but I'll ask them and I can break them
15 down if necessary.

16 Were you able to determine which blows to the
17 head, which injuries, were received first or last? Can you
18 tell the time frame of blows, i.e., injuries?

19 THE WITNESS: And I can't -- with 1 through 7
20 or whatever, I can't -- I can't label them that precisely,
21 but very early because of the bleeding around one of the
22 blows to the mouth was very early, to the lip area. The
23 blows which did not result in fractures could happen almost
24 at any point in time. Could be early or could be late. But
25 of those that were resulting to laceration and associated

1 fractures, it appears that the ones to the right were likely
2 first. The ones to the left were likely latter.

3 THE COURT: Were you able to determine the
4 position of the victim's body when receiving the blows to the
5 head? Did she have to be lying down, or could she be
6 standing?

7 THE WITNESS: I cannot specify with certainty
8 the position of the body. Just have to have access to that
9 portion of the body that is struck. It is likely that the
10 last few blows though were while she was down, and that would
11 be those to the left side.

12 THE COURT: Did you scrape under the
13 fingernails before you clipped them?

14 THE WITNESS: Let me look at my notes. No, I
15 did not scrape them. I only clipped them.

16 MR. HAMMOND: I'm sorry, your Honor. Could I
17 hear that answer again?

18 THE WITNESS: Only clipped them.

19 THE COURT: Have you ever performed this level
20 of investigation on any Yavapai County case before, such as
21 reconstructing the skull or delivering the body to the
22 Maricopa lab?

23 THE WITNESS: I'll break those down
24 independently. We have gone to some great lengths in trying
25 to reconstruct things, not specifically this technique of

1 reconstructing the body, but, yes, we've gone through some
2 reconstruction of skeletonized remains before there was
3 availability of an anthropologist. I've actually done some
4 of the anthropology reconstruction cases.

5 Transporting bodies to -- I've even
6 transported -- usually skeletonized, I've transported bodies
7 even to Tucson.

8 THE COURT: And the next question -- and
9 Mr. Butner and Mr. Hammond, this involves a photograph if you
10 have your series of questions there. It's with regard to
11 photo number 2922.

12 If somebody could put that up because the
13 question, Dr. Keen, is: It looks like the continuation of
14 both rod (red marks above the elbow); is that correct? And
15 then we'll get the photograph up on the screen. It looks
16 like the continuation of both rod (red marks above the
17 elbow); is that correct?

18 THE WITNESS: I think -- if I understand the
19 question correctly, we have both this rod mark, which comes
20 across above the elbow, and we have this rod mark, which has
21 skip in between, and then it has this pattern on the arm
22 which can be the continue -- could be continuation of this
23 same line and yes.

24 THE COURT: The next question: You said the
25 blood depth in Carol's right hand was really thick. Did she

1 have anything in her hand?

2 THE WITNESS: Was not clutching anything. The
3 only thing in her hand other than blood was -- I think --
4 there was some hair, some hair I retrieved, and I don't know
5 if it was from that hand or not. We would have to look at
6 the evidence list to see whether that was. But in terms of
7 holding anything, not holding anything in that hand.

8 THE COURT: How long was the body in Phoenix?

9 THE WITNESS: I don't know. I would have to
10 look at the records. I think it was only a matter of a very
11 few days.

12 THE COURT: The next question involves
13 photo 2922, which was just on the screen, and also 2921. And
14 is that a third mark on the elbow is the question with regard
15 to 2922 and 2921? That's 2922?

16 MR. BUTNER: Correct, Judge, that's Exhibit
17 2922.

18 THE COURT: And the question was: Is that a
19 third mark on the elbow?

20 THE WITNESS: I was going to wait for the
21 other photo.

22 THE COURT: Can we see 2921, Mr. Butner,
23 please.

24 THE WITNESS: Same observation as before.
25 This is a faint line right here which has -- appears to be

1 blached between two fainter areas which would be in line
2 with the more distal strike, so -- but that's the only thing
3 we see in the elbow. I don't see any other elbow -- this is
4 just normal anatomy down here.

5 THE COURT: If these are defensive wounds on
6 right arm, how come they are so parallel like she didn't move
7 from one blow to the next?

8 THE WITNESS: If you hold your arm up, the
9 point of a defensive wound is putting a portion of your body
10 between yourself and the perceived threat and if you keep
11 your arm the same relative position, that would be indicative
12 that there's very little movement and very little change in
13 relative position between the assailant and the victim during
14 the time of that striking.

15 THE COURT: And the next question has to do
16 with a series of photos. Counsel, it's 2938, 39 and 34 and
17 then 62 through 65. If those photos are grouped.

18 MR. HAMMOND: They are, your Honor, and I
19 believe they are all photographs that I used on
20 cross-examination.

21 THE COURT: Okay. Mr. Hammond, if you would
22 put them up, please. I would appreciate that.

23 I think the question that goes with it is
24 this: Which is the front and which is the back of the skull
25 as you look through these photos?

1 MR. HAMMOND: This is 2938, your Honor.

2 THE WITNESS: Okay. Front is to the left.
3 Back is to the right.

4 THE COURT: Okay. Then 2939.

5 MR. HAMMOND: 2939 -- let's turn it so you can
6 see it there. This is the one that's always a little out of
7 focus because of the golf club. Would you like me to turn
8 it?

9 THE WITNESS: Yes. 90 degrees to the right,
10 please.

11 MR. HAMMOND: 90 degrees to the right.

12 THE WITNESS: Now the front is off to the
13 right and reviewing from the right.

14 THE COURT: Mr. Hammond, I think maybe one
15 juror could not see perhaps.

16 MR. HAMMOND: I'm sorry.

17 THE COURT: All right.

18 THE WITNESS: I'll repeat. The front is to
19 our right.

20 THE COURT: Then, Mr. Hammond, whatever photos
21 you have, if you'll announce them as you put them on.

22 MR. HAMMOND: I will. The next one, your
23 Honor, is 2934. That captures the whole photograph.

24 THE WITNESS: Right is to our left. And the
25 back of the head is to our right.

1 THE COURT: Okay.

2 MR. HAMMOND: Your Honor, I think before we
3 take that one down, might I just -- I think you said right is
4 to the left, but I --

5 THE WITNESS: I'm sorry. Front -- okay. It's
6 getting late in the day. The front is to the left. The back
7 is to the right.

8 MR. HAMMOND: Doing these in order, this is
9 2962. Can you see that well enough?

10 THE WITNESS: Yes. Front is to the left.
11 Back is to the right. This is the mastoid process below the
12 ear. And what we're missing here is this little arch that
13 comes around the side of the head. It's been fractured.

14 MR. HAMMOND: Now we have -- doing them in
15 order -- 2963. Can you see that well?

16 THE WITNESS: Yes. The view is on top. And
17 front is to our right. Back is to our left.

18 MR. HAMMOND: The next one is 2964. Whoops.
19 Maybe I ought to zoom this one out a little bit. Do you need
20 me to or can --

21 THE WITNESS: Well, I think it gives -- I know
22 where we are, but it maybe shows it better if you zoom back a
23 little bit.

24 MR. HAMMOND: I'll go back just a little bit.
25 Is that a little bit more --

1 THE WITNESS: That's fine.

2 MR. HAMMOND: How's that?

3 THE WITNESS: To our right is the front. To
4 our left is the back. To the bottom is the right. To the
5 top is the left.

6 MR. HAMMOND: And the last one is 2965. Can
7 you see that one?

8 THE WITNESS: I can, yes. To our right is the
9 front. To our left is the back. There's the mastoid
10 process. This is the right side of the skull, but we're
11 depicting -- we're missing fracture here, and the point of
12 major controversy of our discussions have been here.

13 THE COURT: Thank you, counsel.

14 MR. HAMMOND: That's all of them.

15 THE COURT: Thank you.

16 The next question: Are most of the blows on
17 the right or the left?

18 THE WITNESS: Technically, we outnumber them
19 on the left because we have a blow above the eye. We have
20 four on the left, and we have three on the right. They're
21 discrete.

22 THE COURT: Can you tell us in your own words
23 what you did differently from the Phoenix doctor with the
24 skull? Did you put it together wrong?

25 THE WITNESS: A couple of things. I didn't

1 even finish putting it together. I -- I dropped the
2 styrofoam in to try to place the pieces of bone over and,
3 yes, the one piece that is turned 180 degrees, the piece that
4 has the continuing curve fracture that we've seen
5 subsequently that matches up.

6 Dr. Fulginiti when she puts the whole pieces
7 of bone together, she wasn't -- she didn't have to fight with
8 scalp and all the other things, the soft tissues that were
9 still attached to it. She's dealing with just the bones.

10 I was trying to manipulate the bones without
11 disturbing them because I knew there was a possibility that
12 we would go to that next step where we would actually boil
13 things down, so I tried to move the pieces of bone around and
14 that one got turned 180 degrees.

15 THE COURT: How often do you do your own
16 transcription?

17 THE WITNESS: Depends on where I am.
18 Frequently. I would say of the Yavapai County cases, I
19 probably in the last 10 years have done almost 100 percent of
20 my own transcription.

21 THE COURT: Was your truck bed padded in any
22 way for the trip down to Phoenix to ensure no further damage
23 would happen to the skull?

24 THE WITNESS: First of all, it does have a
25 liner and it's a soft bed in it. Well, it had soft materials

1 in it, but no true padding per se. But there's no damage to
2 it because of the way we carry the -- the skull is not even
3 in contact with -- the skull is up above in the body bag.

4 THE COURT: How tall was Carol Kennedy, and
5 how much did she weigh?

6 THE WITNESS: Okay. I'll have to look.
7 5 foot 8, and 122 pounds.

8 THE COURT: I may -- well, I'll try the
9 pronunciation of it. Is galea the same as fascia tissue?

10 THE WITNESS: It's a kind of a fascia, yes.

11 THE COURT: And then this next question
12 involves Exhibit 2925. If, Mr. Butner, you might have that.
13 And the question, when Mr. Butner puts the photograph on the
14 screen, is: Where is the temple located in Exhibit 2925?

15 MR. HAMMOND: I thought that one had been
16 pulled, your Honor.

17 (Brief pause.)

18 MR. BUTNER: Do you have the laser pointer
19 ready? They're asking for you to point out the temple area
20 on this particular photograph, Dr. Keen.

21 THE WITNESS: The temple area would be this --
22 I'll sort of draw a circle around it. It would be in this
23 kind of area right here. This laceration is up here. This
24 laceration is here. And the temple area would then be this
25 area right in here.

1 MR. BUTNER: Thank you, Dr. Keen.

2 THE COURT: Did you test any other clubs?

3 THE WITNESS: Clubs?

4 THE COURT: Clubs.

5 THE WITNESS: No, sir.

6 THE COURT: Okay. The lawyers may wish to
7 follow up. Mr. Butner.

8 MR. HAMMOND: Your Honor, could I -- I hate to
9 keep doing this, but could we take this down?

10 THE COURT: Yes.

11 (Brief pause.)

12

13 "F O L L O W - U P Q U E S T I O N S"

14 BY MR. BUTNER:

15 Q. Dr. Keen, the question -- this is follow-up on
16 question number 1. You were asked: Does the reconstruction
17 photo evidence from the forensic anthropologist change your
18 opinion about the number of blows to the skull?

19 Did you compare the number of blows that you
20 concluded had occurred to the skull with the number of blows
21 from the forensic anthropologist?

22 A. I discussed with him, but I don't think I've
23 actually seen the anthropology report.

24 Q. So do you know exactly what Dr. Fulginiti concluded
25 in terms of the number of blows to the skull?

1 A. A minimum of seven, but I don't know anything more
2 precisely than that.

3 Q. And what was your conclusion in terms of the number
4 of blows to the skull?

5 A. At least seven.

6 Q. Oh, and, Dr. Keen, were you ever told how many --
7 in regard to follow-up on question number 2. In your
8 opinion -- the question was: In your opinion, could foreign
9 DNA be transferred to Carol's nail clippings from the
10 clippers you used?

11 Were you ever told how many male's DNA was
12 found beneath her fingernails?

13 A. No.

14 MR. BUTNER: No further questions. Thank you.

15 THE COURT: Thank you, Mr. Butner.

16 Mr. Hammond.

17

18 "F O L L O W - U P Q U E S T I O N S"

19 BY MR. HAMMOND:

20 Q. Doctor, just a couple of quick things. You -- you
21 answered one of the jury -- juror questions by saying it was
22 your opinion that -- that the -- if I heard you correctly
23 that it was more likely that the blows were to the right side
24 first and then to the left side?

25 A. Yes, sir.

1 Q. Is that an opinion that you've offered before in
2 any point in the course of these proceedings?

3 A. I don't know. I haven't --

4 Q. Let me ask you a fairer question. Is it an opinion
5 you can recall ever offering in this case?

6 A. Not specifically, no.

7 Q. And it's certainly not one that you devoted time
8 and thought to in the course of your work in this case?

9 A. Well, actually, I've thought about it, but I
10 didn't -- I didn't opine as a conclusion.

11 Q. Okay. Let's talk about the -- the nail clippings
12 for just a moment and the question about whether the -- the
13 swabbing was done by you. Explain again -- or the scraping
14 was done. Explain again exactly what you did with respect to
15 the -- the -- the collection of the nail clippings.

16 A. Main clippings only? And the way that this is
17 done, you take the filter paper, make a little fold so it
18 makes like a funnel. That's why you have the creases in the
19 photo you demonstrated earlier had clippings at some other
20 subsequent place. Then you hold the individual digits, the
21 fingers over this funnel area and clip them and clip them
22 into it and just let them fall into the paper funnel.

23 Q. And then you --

24 A. Then I seal it in an envelope, put the case number
25 on it for identification purposes, and I catalog it as an

1 evidentiary item and I release to it to law enforcement
2 agency, in this case, the Sheriff's Office.

3 Q. And in this case, you did that twice? You did the
4 right hand and the left hand separately?

5 A. Left hand and right hand separately.

6 Q. But you put all of the nails you clipped from each
7 hand together in a single envelope?

8 A. Yes. I did not identify finger by finger. I just
9 identified the group of fingers from the left hand, the group
10 of fingers from the right hand.

11 Q. And you did no -- no swabbing of anything having to
12 do with those fingernails?

13 A. No swabbing was done in the office. And the other
14 technique, which I didn't do, and the specific question was
15 asked did I do scraping. I also did not do scraping. The
16 nails were -- the material in there was dry enough. I didn't
17 want to flake it and lose it, so I just clipped them.

18 Q. You clipped them, and then as you said earlier, you
19 know that those clippings were sent to the DPS laboratory?

20 A. Well, I would trust that that's so, but what I
21 actually know is I released it to the Sheriff's Office.

22 Q. But it would have been your -- your expectation
23 that they would have been transferred -- obviously, the
24 Sheriff's Office can't do anything with those itself?

25 A. They would send it on to DPS.

1 Q. You were asked about the right hand of the victim
2 and about -- about whether there was anything in the hand?

3 A. Yes, sir.

4 Q. Did you ever swab the right hand?

5 A. I did not swab the right hand.

6 Q. You did swab the left hand?

7 A. I did swab the left hand.

8 Q. But you chose not to swab the right hand?

9 A. Yes.

10 Q. And your reason for not swabbing the right hand had
11 something to do with your impression about how much blood
12 there was?

13 A. And -- and the high probability as to whose blood
14 it was. Because of the position the body was in and the
15 blood that was there and the injuries, the very high
16 probability that most of the blood on that right hand was
17 hers. And her DNA is not going to help anything so I went
18 where if there was an encounter at all, if there was any
19 blood that was not hers, I went to the lighter stained areas.
20 That's why I chose to do the left hand.

21 Q. Swabbing is simply taking what would look to us
22 like a Q-Tip --

23 A. I take a -- and I take in this case a sterile
24 Q-Tip.

25 Q. Let me finish, please.

1 A. Okay.

2 Q. You take a swab that looks something like a Q-Tip,
3 but it's not. We know it's a professionally-created designed
4 product for exactly this purpose. And you -- and you run it
5 over the surface that you wish to -- to collect the product
6 from or collect whatever might be on the skin?

7 A. One step in between. Because there's -- those are
8 packaged dry, I want to make sure I make a collection, so I
9 dampen them with sterile saline and then I make the -- then I
10 roll them or swipe them over the surfaces I'm trying to swab.

11 Q. And this is the same hand that you observed had the
12 fractured fingernail?

13 A. Yes, sir.

14 Q. Which you said might be evidence of -- of a
15 struggle between the victim and some assailant?

16 A. Yes, sir.

17 Q. You were asked about the -- the apparent parallel
18 nature of those two contusions that we talked about. Do you
19 accept the -- the suggestion that -- that the fact that
20 they -- that they do appear to be parallel makes it more
21 likely that -- that the victim was not conscious at the time
22 of those -- of those events that caused the contusions?

23 A. No, sir. Just -- just that the relationship
24 between the victim and the assailant was not particularly
25 changing, it could be in rapid -- rapid succession.

1 Q. Could be in rapid succession, but if anyone is --
2 is struck once and conscious, are they not likely to flinch?

3 A. They might, but it's not an identical strike. It's
4 just an impression.

5 Q. You're talking about the -- the contusion is just
6 an impression, or are you talking about your impression?

7 A. My impression.

8 Q. Your impression is that -- that it could be either?

9 A. It can be either, yes. It could be -- could be
10 conscious or unconscious.

11 Q. And the fact that they are parallel doesn't cause
12 you as a forensic pathologist to think that it may be more
13 likely that the victim was unconscious --

14 A. No.

15 Q. -- and that her arm was not moving?

16 A. It doesn't.

17 Q. Did you ever photograph the fractured fingernail?

18 A. I think that there is a photo. I didn't personally
19 because I was in the process of collecting, but I think that
20 there is a photo that I have seen of the fractured
21 fingernail.

22 Q. Separately -- separately photographed from the
23 other fingernails on the right hand?

24 A. I think it's -- I think it's -- I think what we see
25 is the hand with the fractured nail, and you can see the

1 fractured nail in the photo. That's my recollection.

2 Q. Can you see the nail or just what's left of it?

3 A. You can see where it's missing.

4 MR. HAMMOND: Okay. Thank you, your Honor.
5 I have no further questions.

6 THE COURT: Mr. Butner, anything on those
7 questions? Anything further?

8

9 "F O L L O W - U P Q U E S T I O N S"

10 BY MR. BUTNER:

11 Q. Dr. Keen, when you were shown the fingernails that
12 were clipped earlier and placed into evidence by Mr. Hammond,
13 were you able to tell which hand those fingernails came from?

14 A. No. The identifying information is not included in
15 the photo.

16 Q. Okay. So they could have come from either the
17 right or the left hand; is that correct?

18 A. Yes, sir.

19 MR. BUTNER: No further questions.

20 THE COURT: Dr. Keen, if you would remain
21 there for a minute. I did get one other juror question.

22 If I could see counsel.

23 (Discussion off the record.)

24 (Next page, please.)

25

"Q U E S T I O N S B Y T H E J U R Y"

THE COURT: Dr. Keen, if you can answer this question. Can you transfer DNA under fingernails by shaking hands?

THE WITNESS: Depends on how you shake hands. You can make -- you can transfer touch DNA, but it's -- it's not the typical way, but it can be done.

THE COURT: Follow-up to that, Mr. Butner?

MR. BUTNER: No, Judge.

THE COURT: Mr. Hammond.

"F O L L O W - U P Q U E S T I O N S"

BY MR. HAMMOND:

Q. Dr. Keen, you mentioned touch DNA. When we talk about touch DNA, we're talking about what might typically be trace amounts of DNA? Isn't that what you had in mind?

A. Yes, sir.

Q. What sometimes people call low combination numbered DNA?

A. I think it's synonomous.

Q. You I take it have not reviewed any of the studies that have addressed the question about intimate contact and the amount of contact typically necessary to transfer a full DNA profile from one person to another?

A. That also is -- specifically, I don't do the DNA

1 analyses, but -- and that is quite variable, but it's more
2 than just a touch.

3 Q. Yeah. Have you reviewed any of the studies that
4 have been done in the -- in the very recent past with respect
5 to -- to how DNA is communicated from one person to another
6 and the difference between intimate contact and what might be
7 called isolated touch contact?

8 A. I haven't specifically addressed that recently. I
9 have within the last year, but not in the last few months.

10 MR. HAMMOND: I have no further questions.

11 THE COURT: Thank you.

12 Mr. Butner, anything else?

13 MR. BUTNER: Nothing further, Judge. Thank
14 you.

15 THE COURT: May Dr. Keen be excused as a
16 witness, Mr. Butner?

17 MR. BUTNER: Yes, he may.

18 MR. HAMMOND: Can I have just a moment?

19 THE COURT: Yes.

20 MR. HAMMOND: Your Honor, I think that the
21 Doctor ought to be subject to recall.

22 THE COURT: Okay. Dr. Keen, you will be
23 excused then at this point, but you may be recalled. And I
24 have already mentioned to you and you've acknowledged that
25 the rule of exclusion of witnesses does apply in this case,

1 and you know what that means?

2 THE WITNESS: Yes, sir.

3 THE COURT: Okay. You are excused at this
4 time.

5 THE WITNESS: Okay. Thank you.

6 THE COURT: And, ladies and gentlemen, we will
7 go ahead and take the evening recess. Remember the
8 admonition. Please be reassembled at 9:00 a.m., and we will
9 start as soon as we can after that.

10 Thank you. We are in recess.

11 (The proceedings concluded at 4:47 p.m.)

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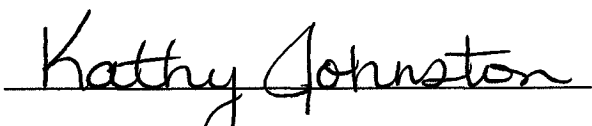
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REPORTER'S CERTIFICATE

The above and foregoing is a true and complete transcription of my stenotype notes taken in my capacity as Acting Official Reporter of Yavapai County Superior Court, Kathy Johnston, Certified Reporter No. 50164, Division Six, at the time and place as set forth.

Dated at Prescott, Arizona, this 9th day of September, 2010.


KATHY JOHNSTON
Certified Reporter No. 50164
Registered Professional Reporter

FILED ON _____